

INVENTORY OF INDUSTRIAL  
POINT SOURCE DISCHARGES IN THE GREAT LAKES BASIN  
ONTARIO - 1983

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Ontario Ministry of the Environment  
June, 1985

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POINT SOURCE DISCHARGES IN THE GREAT LAKES BASIN  
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# INVENTORY OF INDUSTRIAL

## POINT SOURCE DISCHARGERS IN THE GREAT LAKES BASIN

ONTARIO - 1983

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# INVENTORY OF INDUSTRIAL

## POINT SOURCE DISCHARGERS IN THE GREAT LAKES BASIN

ONTARIO - 1983

### Introduction

There are an estimated 11000 industrial facilities in the province which generate varying amounts of process, cooling and other wastewaters. The vast majority of these facilities discharge their effluents to municipal sanitary sewer systems and the combined wastes typically receive secondary (i.e. biological) treatment. To ensure effective operation of the treatment plants many of these industries are required to provide pretreatment of their wastewaters before discharge to the municipal collection system.

In this report the Ministry is providing information on some 100 industrial facilities in the Great Lakes basin whose treated wastewater discharge inputs directly to one of the Great Lakes, to one of the inter connecting channel or to a Great Lakes tributary watercourse. This compilation includes all industries considered to have potential impact on Great Lakes water quality.

The inventory has been prepared by the Ministry of the Environment under the direction of the Board of Review for the Canada-Ontario Agreement on Great Lakes Water Quality for submission to the International Joint Commission in fulfillment of the requirements of Article VI 1(c) of the 1978 Great Lakes Water Quality Agreement. The inventory which is updated annually and identifies industrial sources and processes, reports effluent loadings and loading limits and comments on the status of the abatement programs.

The 1983 report contains information on ninety-nine individual dischargers of which forty-seven discharge directly to the Great Lakes or connecting channels and fifty-two discharge to tributary waters. Also included this year is a loading trend summary

reflecting progress made by petroleum refineries, pulp and paper, and primary steel producers in the period since 1973.

#### Data Included In The Inventory

The information recorded for each of the discharges listed in the inventory includes:

- 1) The name of the facility and the municipality in which the discharger is located.
- 2) The Ministry of Environment Region and District Office that deals with the facility.
- 3) A description of the industrial activity.
- 4) The nature of the flow - continuous, intermittent -- and the means of discharge - surface, open pipe, submerged diffuser, etc.
- 5) The receiving water bodies.
- 6) The average annual effluent flow.
- 7) The pollutants discharged and the limits that are set.
- 8) Comments on the effluent quality and/or the status of the abatement program.

#### Pollution Abatement Requirements

The emphasis of the Ontario Ministry of the Environment water quality management approach is to set effluent requirements based on the waste receiving capacity of a water body and the Provincial Water Quality Objectives, with consideration also given to the

federal or provincial effluent regulations and guidelines. For the Great Lakes, the Agreement water quality objectives are also taken into consideration.

The implementation of pollution control is thus a co-operative federal-provincial endeavour. Under the federal Fisheries Act, national guidelines and regulations are developed to control water pollution from specific industrial sectors. Fish processors, meat and poultry plants, potato processors, petroleum refineries metal mining and the pulp/paper industry are currently subject to national guidelines or regulations. Industrial guidelines, which do not have legal status, indicate minimum acceptable national standards of practice for existing plants. Regulations which are legally enforceable, prescribe specific national effluent limitations for new and expanding plants for the above industrial sectors, with the exception of regulations for chlor-alkali plants which are applicable to both existing and new facilities.

Under the federal-provincial Accord for Environmental Protection, Ontario has agreed to adopt pollution control requirements at least as stringent as the national requirements described above. Where federal effluent requirements do not meet provincial water quality objectives, more stringent requirements are imposed by the provincial government.

Under provincial legislation and regulations, the Ontario Ministry of the Environment employs a variety of measures to encourage compliance with its requirements. New or expanded facilities must receive a Certificate of Approval before construction begins. Permissible discharge levels are now included in the Certificates of Approval. For existing plants, industry programs for achieving compliance may be approved under a voluntary plan, a formal Program Approval, a Requirement and Direction, or a Control Order. Failure to comply with program requirements developed under provisions of the Ontario Environmental Protection Act and the Ontario Water Resources Act can lead to prosecution.

In the case of a few reported parameters such as Total Dissolved Solids and Sulphates, current Ministry effluent guidelines stipulate that levels be kept as low as possible using best available practicable control technology. There is, therefore, no target loading figure included in the report.

The target loads for each Ontario industrial point source discharge reported in the inventory were established by the Ministry using one or more of the mechanisms described above.

Enquiries concerning the inventory and the industrial abatement program may be directed to the:

Director  
Water Resources Branch  
1 St. Clair Ave. W.  
Toronto, Ontario  
(416) 965-6954

Additional information on specific industrial dischargers may be obtained through the appropriate regional offices of the Ministry. Addresses are provided at the end of the report.

Wastewater Loadings and Production Figures  
for the  
Petroleum Refining, Pulp and Paper and Steel Industries

PETROLEUM REFINERIES PROGRESS  
(all figures are in kilograms per day)

	<u>Total Suspended Solids</u>				
	<u>1978</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Refinery & Location					
Petro Canada (formerly B.P.) @ Oakville	92	47	39	31.1	60.2
Esso @ Sarnia	547	32.6	322	276	(0)**
Gulf @ Clarkson	872	1,493	235	210	226
Petrosar @ Corunna*	-	86.9	209	133	106
Shell @ Corunna	1,240	745	865	309	(0)**
Shell @ Oakville	35		48.8	40.3	50.6
Suncor	320	296	347	393	67.3
Texaco @ Nanticoke*	-	14.4	7.8	5.1	9.6
Totals	3,100	3,000	2,074	1,398	520

(all figures are in kilograms per day)

	<u>Phenolics</u>				
	<u>1978</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Refinery & Location					
Petro Canada (formerly B.P.) @ Oakville	0.2	0.14	0.12	0.08	0.12
Esso @ Sarnia	4.4	0.9	1.8	1.9	0.68
Gulf @ Clarkson	11	6.9	3.5	2.8	0.22
Petrosar @ Corunna*	-	0.28	0.8	1.31	0.40
Shell @ Corunna	2.2	5.08	0.6	0.51	0.72
Shell @ Oakville	0.1	0.04	0.036	0.03	0.035
Suncor	2.0	2.44	3.1	1.9	0.77
Texaco @ Nanticoke*	-	0.06	0.04	0.04	0.12
Totals	19.9	15.8	10.0	8.57	3.07

\* On stream in 1978

\*\* Intake exceeds discharge



PETROLEUM REFINERIES PROGRESS cont'd  
(all figures are in kilograms per day)

	<u>Ammonia - Nitrogen</u>				
	<u>1978</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Refinery & Location					
Petro Canada (formerly R.P.) @ Oakville	79	23.3	19.0	29.8	29.1
Esso @ Sarnia	148	118	116	83	81
Gulf @ Clarkson	94	50.4	29.7	54.7	33.2
Petrosar @ Corunna*	-	13.9	53.4	39.9	14.5
Shell @ Corunna	40.8	82.3	15.4	16.5	(0)**
Shell @ Oakville	19		36.8	13.7	23
Suncor	69	69.3	42	49	30.3
Texaco @ Nanticoke*	-	1.6	0.6	2.1	13.6
Totals	450	359	313	229	225

(all figures are in kilograms per day)

	<u>Oil &amp; Grease</u>				
	<u>1978</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Refinery & Location					
Petro Canada (formerly R.P.) @ Oakville	24	14	5.2	2.4	6.0
Esso @ Sarnia	200	222	142	131	10
Gulf @ Clarkson	450	649	223	232	223
Petrosar @ Corunna*	-	5.52	9.0	6	18.1
Shell @ Corunna	142	262	56.7	58.7	72.1
Shell @ Oakville	16	15	15.5	7.3	12.4
Suncor	46	43.7	41	40.4	24.3
Texaco @ Nanticoke*	-	6.3	5.5	2.9	6.6
Totals	878	1,218	497	481	372

Year	<u>1967</u>	<u>1976</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Production RRLs/day	403,000	476,000	574,000	633,000	502,000	519,000

1967 Totals Kilograms per day

Ammonia	2,320
Suspended Solids	-
Oil and Grease	4,110
Phenolics	102

\*\* Intake exceeds discharge

# PULP AND PAPER INDUSTRY PROGRESS

(ALL DATA IN MEGAGRAMS PER DAY)

	TOTAL SUSPENDED SOLIDS				BIOCHEMICAL OXYGEN DEMAND			
	1977	1980	1982	1983	1977	1980	1982	1983
ABITIBI-PRICE INC.								
FINE PAPERS )	)		1.00	1.70 )	)		3.20	3.70
FORT WILLIAM )	9.40)	4.89	1.30	1.30 )	75.1 )	51.1	11.20	8.10
THUNDER BAY )	)		1.00	1.10 )	)		19.80	17.90
BEAVER WOOD	1.10	.82	.78	1.86	2.80	1.50	2.00	2.50
@ THOROLD								
DOMTAR CONSTRUCTION	1.70	.21	.18	.22	.40	.30	.40	.50
@ THOROLD								
DOMTAR FINE PAPERS	.20	.42	.37	.34	.20	.83	.77	.75
@ ST. CATHARINES								
DOMTAR FINE PAPERS	13.40	12.00	10.50	10.90	17.70	13.30	13.30	16.10
@ CORNWALL								
DOMTAR PACKAGING *	4.20	4.20	4.40	5.00	15.70	20.90	16.90	16.50
@ RED ROCK								
DOMTAR PACKAGING	.40	.30	.33	.40	1.70	2.90	3.60	4.50
@ TRENTON								
EDDY FOREST *	7.10	8.10	6.50	5.90	28.60	22.50	21.40	13.90
@ ESPANOLA								
FRASER	-	3.50	.95	.84	6.00	4.40	2.30	1.80
@ THOROLD								
GREAT LAKES *	17.50	14.40	12.30	11.70	92.50	102.00	82.00	71.00
@ THUNDER BAY								
JAMES RIVER	6.60	10.50	9.70	7.10	17.80	19.80	17.10	13.50
@ MARATHON								
KIMBERLY CLARK *	8.50	7.40	7.10	6.50	31.50	30.00	32.00	36.10
@ TERRACE BAY								
KIMBERLY CLARK	.30	.22	.21	.11	.50	.52	.52	.58
@ ST. CATHARINES								

\* MILLS HAVE EXPANDED  
SINCE 1977

...CONTINUED

PULP AND PAPER INDUSTRY PROGRESS

(CONTINUED)

(ALL DATA IN MEGAGRAMS PER DAY)

	TOTAL SUSPENDED SOLIDS				BIOCHEMICAL OXYGEN DEMAND			
	1977	1980	1982	1983	1977	1980	1982	1983
MacMILLAN BLOEDEL @ STURGEON FALLS	-	6.20	1.70	2.20	-	42.10	64.60	58.50
ONTARIO PAPER * @ THOROLD	10.00	7.50	9.60	10.20	24.10	21.70	14.80	16.60
ST. MARYS PAPER @ SAULT STE. MARIE	8.60	13.50	12.60	3.40	12.00	8.60	6.30	5.90
STRATHCONA PAPER @ STRATHCONA	.10	.10	.045	.062	.40	.87	.52	.65
TRENT VALLEY PAPERBOARD @ TRENTON	1.10	1.20	.35	.28	.50	.34	.28	-
TOTALS	90.20	95.50	80.90	71.10	327.00	344.00	313.00	289.00

YEAR	1967	1977	1980	1982	1982
SALEABLE PRODUCTION	7350	8219	9119	8552	9477
1967 LOADINGS					
TOTAL SUSPENDED SOLIDS	375				
BIOCHEMICAL OXYGEN DEMAND	610				
1973 LOADINGS					
TOTAL SUSPENDED SOLIDS	126				
BIOCHEMICAL OXYGEN DEMAND	470				

STEEL INDUSTRY PROGRESS  
(All loadings are in Megagrams per day)

	<u>AMMONIA</u>				<u>PHENOLS</u>			
	<u>1977</u>	<u>1980</u>	<u>1982</u>	<u>1983</u>	<u>1977</u>	<u>1980</u>	<u>1982</u>	<u>1983</u>
Algoma Steel @ Sault Ste. Marie	5.7	5.69	4.23	3.16	0.15	0.149	0.102	0.101
Dofasco @ Hamilton	1.59	2.05	1.54	0.97	0.045	0.032	0.048	0.016
Stelco @ Hamilton	2.27	4.0	1.63	0.57	0.075	0.114	0.115	0.069
Stelco @ Nanticoke*	-	-	0.014	0.006	-	-	0.00006	0.00058
TOTALS	<u>9.56</u>	<u>11.74</u>	<u>7.41</u>	<u>4.71</u>	<u>0.27</u>	<u>0.30</u>	<u>0.265</u>	<u>0.186</u>

\* New steel facility built 1979-81

(All loadings are in Megagrams per day)

	<u>SUSPENDED SOLIDS</u>				<u>OIL &amp; GREASE</u>			
	<u>1977</u>	<u>1980</u>	<u>1982</u>	<u>1983</u>	<u>1977</u>	<u>1980</u>	<u>1982</u>	<u>1983</u>
Algoma Steel @ Sault Ste. Marie	11.6	11.7	7.17	7.83	2.1	4.42	1.51	1.61
Dofasco @ Hamilton	29.9	21.1	16.3	12.5	2.27	0.31	0.20	0.21
Stelco @ Hamilton	49.9	12.1	6.7	12.3	5.90	1.18	0.070	1.37
Stelco @ Nanticoke*	-	-	0.23	0.28	-	-	0.022	0.038
TOTALS	<u>91.4</u>	<u>45.0</u>	<u>30.4</u>	<u>32.9</u>	<u>10.27</u>	<u>5.91</u>	<u>1.79</u>	<u>3.23</u>

STEEL INDUSTRY PROGRESS cont'd  
(All loadings are in Megagrams per day)

	<u>CYANIDE</u>			
	<u>1977</u>	<u>1980</u>	<u>1982</u>	<u>1983</u>
Algoma Steel @ Sault Ste. Marie	2.2	0.603	0.158	0.127
Dofasco @ Hamilton	0.045	0.026	0.022	0.039
Stelco @ Hamilton	0.18	0.48	0.070	0.099
Stelco @ Nanticoke*	-	-	0.001	0.0016
<b>TOTALS</b>	<u>2.43</u>	<u>1.11</u>	<u>0.251</u>	<u>0.267</u>

	<u>IRON</u>			
	<u>1978</u>	<u>1980</u>	<u>1982</u>	<u>1983</u>
Algoma Steel @ Sault Ste. Marie	-	-	3.25	3.49
Dofasco @ Hamilton	6.80	2.43	-	2.47
Stelco @ Hamilton	11.03	8.65	3.50	4.63
Stelco @ Nanticoke*	-	-	0.013	0.023
<b>TOTALS</b>	-	-	-	10.61

<u>YEAR</u>	<u>1967</u>	<u>1976</u>	<u>1977</u>	<u>1980</u>	<u>1982</u>	<u>1983</u>
Finished Product Megagrams	8,000,000	11,800,000	11,800,000	13,100,000	10,100,000	10,800,000

1967 totals megagrams per day

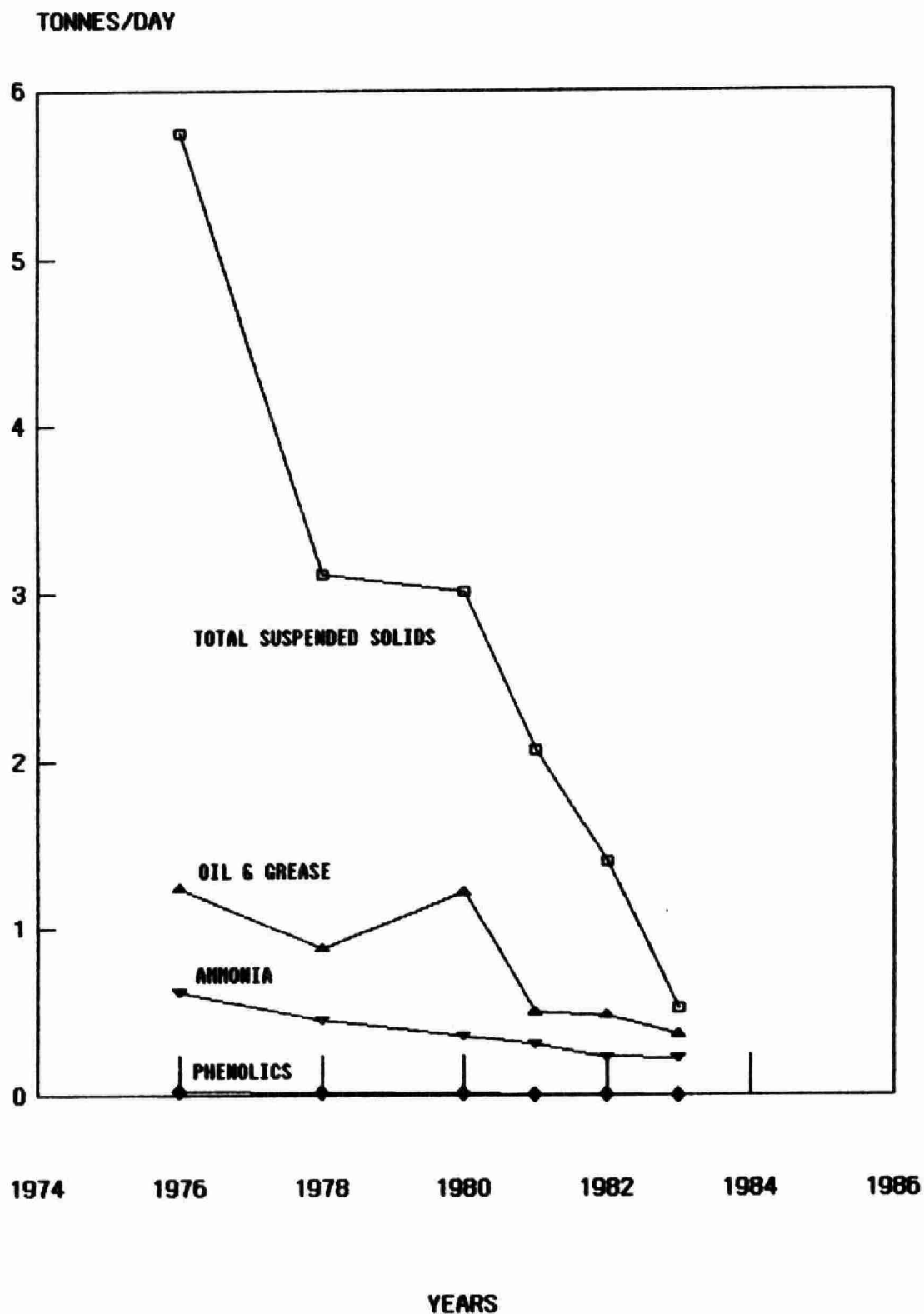
Ammonia	23.9
Suspended Solids	126
Phenols	2.73
Oil & Grease	30
Cyanide	2.37

Loading Trends  
for the  
Petroleum Refining, Pulp and Paper and Steel Industries

# REFINERIES SECTOR PROGRESS

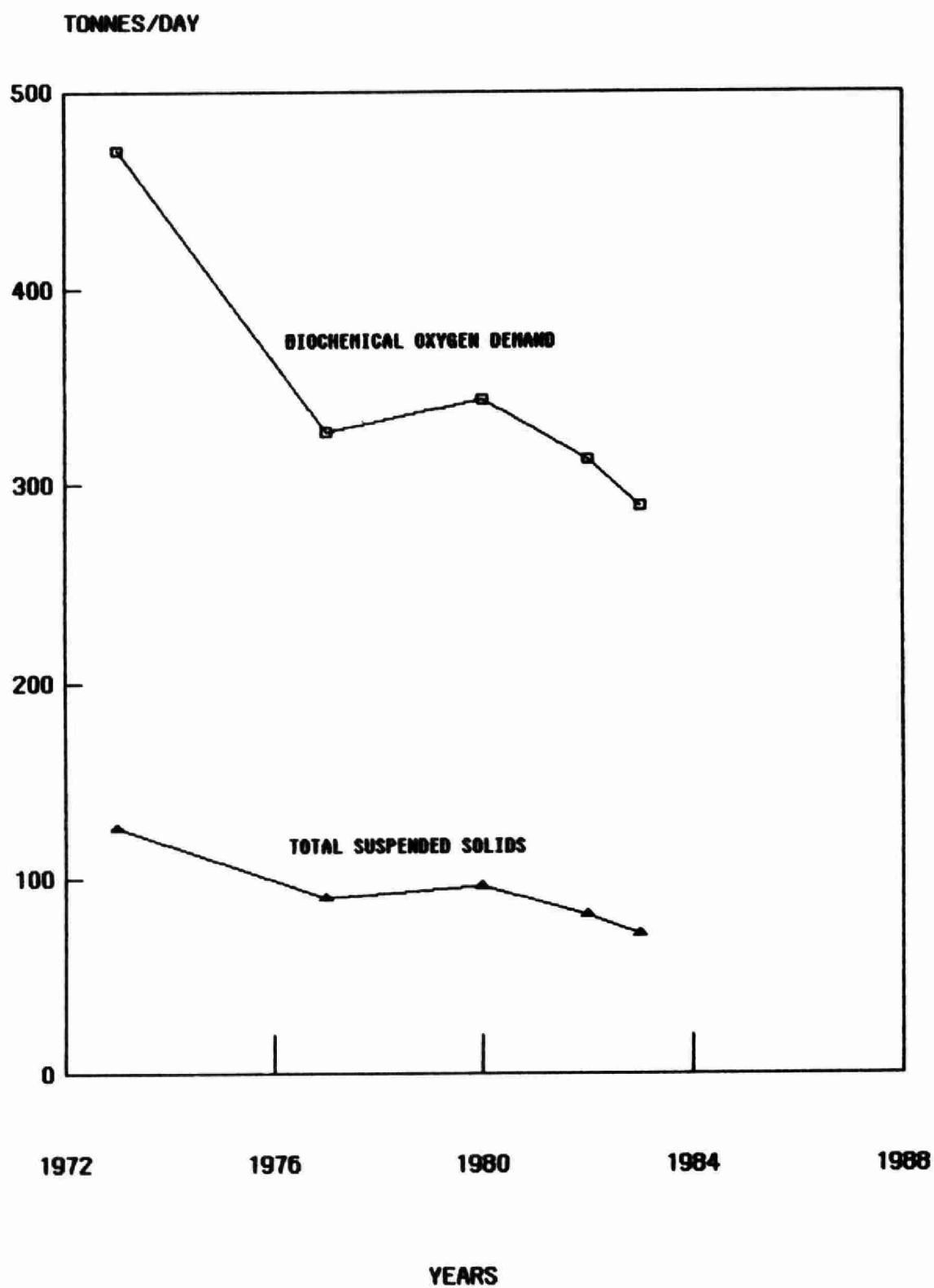
FOUR MAJOR PARAMETERS

ONTARIO GREAT LAKES BASIN



# PULP & PAPER SECTOR PROGRESS

TWO MAJOR PARAMETERS  
ONTARIO GREAT LAKES BASIN

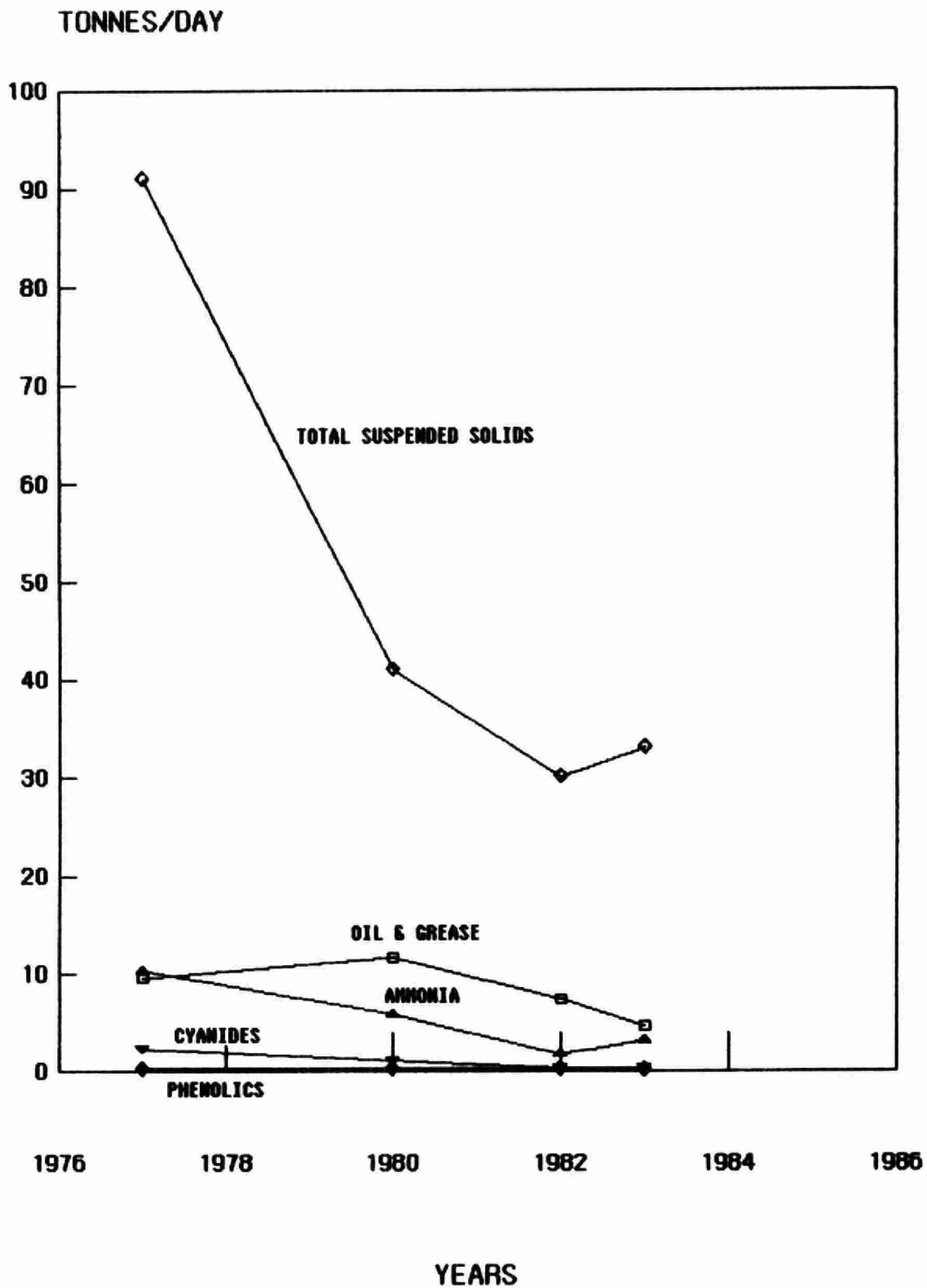




# STEEL SECTOR PROGRESS

FIVE MAJOR PARAMETERS

ONTARIO GREAT LAKES BASIN



Individual Source Data  
for Industries  
in the Ontario Great Lakes Basin

# Alphabetical List of Sources

<u>Company</u>	<u>Location</u>	<u>Basin</u>	<u>Page</u>
Abitibi-Price Inc.	(Fort William Div.), Thunder Bay	Lake Superior	4
Abitibi-Price Inc.	(Provincial Papers Div.), Thunder Bay	Lake Superior	5
Abitibi-Price Inc.	(Thunder Bay Div.), Thunder Bay	Lake Superior	6
Allied Chemical Canada Inc.	Amherstburg	Lake Erie	43
Atlas Steel Company	Welland	Lake Ontario	59
Algoma Steel Corporation Ltd.	Sault Ste. Marie	Lake Huron	10
RCL (Formerly TCF)	Cornwall	St. Lawrence R.	97
B. F. Goodrich	Niagara Falls	Lake Ontario	62
Borg-Warner Chemicals Ltd.	Cobourg	Lake Ontario	84
Beaver Wood Fibre Company	Thorold	Lake Ontario	72
Can Oxy-Durez	Fort Erie	Lake Ontario	55
Canada Starch Co. Ltd.	Cardinal	St. Lawrence River	94
Canadian Canner's Ltd.	St. Davids	Lake Ontario	68
Canadian Industries Ltd.	Cornwall	St. Lawrence River	99
Canadian Industries Ltd.	Courtright	Lake Erie	38
Canadian Salt Company Ltd.	Windsor	Lake Erie	40
Celanese Canada Ltd.	Ernestown Township	Lake Ontario	91
Chrysler Canada Ltd.	Windsor	Lake Erie	41
Courtaulds - Ltd.	Cornwall	St. Lawrence River	96
Cyanamid Canada Inc.	Niagara Falls	Lake Ontario	61
Cyanamid Canada Inc.	Niagara Falls (chemicals)	Lake Ontario	64
Denison Mines Ltd.	Elliot Lake	Lake Huron	12
Diners Delite	Niagara Falls	Lake Ontario	65
Dofasco	Hamilton	Lake Ontario	77
Domtar Chemicals Ltd.	Goderich	Lake Huron	26
Domtar Construction Materials Ltd.	Thorold	Lake Ontario	76
Domtar Fine Papers	Cornwall	St. Lawrence River	98
Domtar Fine Papers	St. Catharines	Lake Ontario	70
Domtar Packaging Ltd.	Trenton	Lake Ontario	88
Domtar Packaging Ltd.	Red Rock	Lake Superior	7
Dow Chemical Canada Inc.	Sarnia	Lake Erie	27
Dupont Canada Inc.	Maitland	St. Lawrence River	92
Dupont Canada Inc.	Corunna	Lake Erie	34
E. B. Eddy Forest Products Ltd.	Espanola	Lake Huron	15
Eldorado Nuclear Ltd.	Port Granby	Lake Ontario	85

<u>Company</u>	<u>Location</u>	<u>Basin</u>	<u>Page</u>
Eldorado Nuclear Ltd.	Welcome	Lake Ontario	86
Eldorado Nuclear Ltd.	Port Hope	Lake Ontario	87
Esso Chemicals Canada Ltd.	Sarnia	Lake Erie	28
Esso Petroleum Canada	Sarnia	Lake Erie	29
Ethyl Canada Inc.	Corunna	Lake Erie	35
Falconbridge Ltd. (Moose Lake)	Falconbridge	Lake Huron	18
Falconbridge Ltd.	Falconbridge	Lake Huron	16
Falconbridge Ltd.	Onaping Falls	Lake Huron	17
Fiberglas Canada Inc.	Sarnia	Lake Erie	30
Fleet Manufacturing Company Ltd.	Fort Erie	Lake Ontario	57
Ford Motor Co. of Canada Ltd.	Oakville	Lake Ontario	79
Ford Motor Company of Canada Ltd.	Niagara Falls	Lake Ontario	63
Ford Motor Company of Canada Ltd.	Windsor	Lake Erie	42
Fraser Inc.	Thorold	Lake Ontario	75
General Motors of Canada Ltd.	St. Catharines	Lake Ontario	69
GNR Batteries Canada Inc.	Fort Erie	Lake Ontario	56
Great Lakes Forest Products Ltd.	Thunder Bay	Lake Superior	1
Gulf Canada Products Ltd.	Mississauga	Lake Ontario	83
H. J. Heinz Company of Canada Ltd.	Leamington	Lake Erie	44
Hayes-Dana Inc.	Thorold	Lake Ontario	73
INCO Ltd. (Garson Mine)	Sudbury	Lake Huron	19
INCO Ltd. (Copper Cliff Creek)	Sudbury	Lake Huron	20
INCO Ltd. Sulphur Products Dept.	Sudbury	Lake Huron	21
INCO Ltd. (Nolin Creek)	Sudbury	Lake Huron	22
INCO Metals Ltd.	Port Colborne	Lake Erie	54
Industrial Grain Products	Thunder Bay	Lake Superior	2
International Minerals and Chemicals	Dunnville	Lake Erie	53
J. M. Schneider Inc.	Ayr	Lake Erie	52
James River Marathon Ltd.	Marathon	Lake Superior	9
Kimberly Clark of Canada Ltd.	St. Catharines	Lake Ontario	71
Kimberly-Clark of Canada Ltd.	Terrace Bay	Lake Superior	8
Kraft Foods Ltd.	Ingleside	St. Lawrence River	95
MacMillan Bloedel Ltd.	Sturgeon Falls	Lake Huron	23
Nitrochem Inc.	Maitland	St. Lawrence River	93
Norton Company	Niagara Falls	Lake Ontario	66
Omstead Food Ltd.	Wheatley	Lake Erie	45
Ontario Hydro (Domestic Treatment)	Tiverton	Lake Huron	24
Ontario Hydro (Heavy Water Plant)	Tiverton	Lake Huron	25
Ontario Paper Company Inc.,	Thorold	Lake Ontario	74

<u>Company</u>	<u>Location</u>	<u>Basin</u>	<u>Page</u>
Petro Canada Products Ltd.	Oakville	Lake Ontario	81
Petrosar Ltd.	Sarnia	Lake Erie	31
Polysar Ltd.	Sarnia	Lake Erie	32
Rio Algom Ltd. (Panel Mill)	Elliot Lake	Lake Huron	13
Rio Algom Ltd. (Quirke Mill)	Elliot Lake	Lake Huron	14
Riechhold Chemicals Ltd.	Thunder Bay	Lake Superior	3
Shell Canada Ltd.	Corunna	Lake Erie	37
Shell Canada Ltd.	Oakville	Lake Ontario	80
Silknit Ltd. Textile Division	Cambridge	Lake Erie	48
Sohio	Niagara Falls	Lake Ontario	67
Solarware	Cambridge	Lake Erie	49
St. Mary's Paper Inc.	Sault Ste. Marie	Lake Huron	11
Stanley Works Ltd.	New Hamburg	Lake Erie	51
Stelco Inc.	Hamilton	Lake Ontario	78
Stelco Inc. Lake Erie Works	Nanticoke	Lake Erie	47
Stelco Page Hersey Works	Welland	Lake Ontario	60
Stelco Welland Tube Works	Welland	Lake Ontario	58
Strathcona Paper Company	Camden East Township	Lake Ontario	90
Suncor Sunoco Group	Sarnia	Lake Erie	33
Tend-R-Fresh Poultry	Petersburg	Lake Erie	50
Texaco Canada Ltd.	Port Credit	Lake Ontario	82
Texaco Canada Ltd.	(Nanticoke Refinery), Jarvis	Lake Erie	46
Trent Valley Paperboard Mills	Trenton	Lake Ontario	89
Union Carbide Canada Ltd.	Corunna	Lake Erie	36
Windsor Bumper	Windsor	Lake Erie	39

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ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000840009 MOE REGION: Northwest DISTRICT: Thunder Bay

COMPANY NAME Great Lakes Forest Products Ltd.  
PLANT LOCATION: Thunder Bay

INDUSTRIAL ACTIVITY: Pulp and Paper Mill PROCESS TYPE: Newsprint and kraft pulp are made from logs and chips by the kraft, stone groundwood and sulphite pulping processes.

DISCHARGE TYPE: continuous through a submerged diffuser

RECEIVING WATERBODY: DIRECT: Kaministiquia River INDIRECT: 9 km to Lake Superior (Thunder Bay)

AVERAGE ANNUAL EFFLUENT FLOW (CUBIC METRES/DAY): 266,000

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD* (KG/DAY)</u>
Biochemical Oxygen Demand	71,000	see comments
Suspended Solids - Total	11,700	14,000
Dissolved Solids - Total	318,000	--
Phosphorus - Total	197	266

COMMENTS:

Effluent quality met the Total Suspended Solids requirement and the phosphorus guideline. In addition, the company has met the BOD limit of 27,000 kg/day applicable to the Kraft Operations. Start-up of recovery of spent sulphite liquor system in 1983 has decreased the overall BOD load. Existing Control Order expires June 1985.

\* Existing Control Order and "Guidelines for the Control of Industrial Phosphorus Discharges" - MOE October, 1976

2515g/16  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000880005

MOE REGION: Northwest

DISTRICT: Thunder Bay

COMPANY NAME Industrial Grain Products  
PLANT LOCATION: Thunder Bay

INDUSTRIAL ACTIVITY: Starch from wheat plant

PROCESS TYPE: Starch and gluten are separated from the grain.

DISCHARGE TYPE: continuous surface

RECEIVING WATERBODY: DIRECT: Kaministiquia River

INDIRECT: 3 km to Lake Superior (Thunder Bay)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 909

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	7,250	-

COMMENTS:

Due to unforeseen problems with this first-ever application of the anaerobic process to a starch/gluten plant effluent, the Control Order was extended to permit optimization of this process. The Order includes an interim BOD limit of 7500 kg/day to be met February, 1984 (met in 1983) and a limit of 900 kg/day to be met by February 28, 1985.

2515g/17  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 000183-00-0(9)

MOE REGION: Northwest

DISTRICT: Thunder Bay

COMPANY NAME Reichhold Chemicals Ltd.

PLANT LOCATION: Thunder Bay

INDUSTRIAL ACTIVITY: Chemical manufacturer

PROCESS TYPE: Phenolic chemicals

DISCHARGE TYPE: continuous surface

RECEIVING WATERBODY: DIRECT: Kaministiquia River

INDIRECT: 7 km to Lake Superior (Thunder Bay)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 392

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD* (KG/DAY)</u>
Phenolics - Total	0.31	0.39
Phosphorus - Total	0.25	4.5
Total Suspended Solids	190	5.88

COMMENTS:

Discharge quality met the phosphorus and phenolic concentration guidelines, sludge bypassing from the new wastewater treatment system resulted in exceedance of the suspended solids guideline. System operations to be reassessed in 1985.

\* Phenolic requirement 1 mg/l in Certificate of Approval; Suspended Solids guideline 15 mg/l.

2515g/89

85/01/31



ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000860205 MOE REGION: Northwest DISTRICT: Thunder Bay

COMPANY NAME Abitibi-Price Inc.  
PLANT LOCATION: Fort William Division  
Thunder Bay

INDUSTRIAL ACTIVITY: Pulp and Paper Mill  
(Newsprint)

PROCESS TYPE: Newsprint is made from logs and chips by  
using the stonegroundwood and Sulphonated  
Chemical Mechanical processes.

DISCHARGE TYPE: continuous surface

RECEIVING WATERBODY: DIRECT: Lake Superior (Thunder Bay) INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 23,500

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	8,100	**
Suspended Solids - Total	1,300	--
Dissolved Solids - Total	17,700	--
Phosphorus - Total	9.87	23.5

COMMENTS:

Effluent quality met Ministry requirements. A new Control Order is to be negotiated and issued in early 1985.

\* Expired Control Order and "Guidelines for the Control of Industrial Phosphorus discharges in liquid effluents" -  
MOE October 1976.

\*\* A BOD requirement of 35,000 kg/day (approx.) is applicable to the combined effluents of all three Abitibi-Price  
Mills. This limit and the phosphorus guideline were met.

2515g/14  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000860106

MOE REGION: Northwest

DISTRICT: Thunder Bay

COMPANY NAME Abitibi-Price Inc.

PLANT LOCATION: Provincial Papers Division  
Thunder Bay

INDUSTRIAL ACTIVITY: Pulp and Paper  
(Fine Papers)

PROCESS TYPE: Fine papers are made from logs by the  
stone groundwood process and from  
purchased pulp.

DISCHARGE TYPE: continuous surface

RECEIVING WATERBODY: DIRECT: Lake Superior (Thunder Bay)

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 51,900

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD* (KG/DAY)</u>
Biochemical Oxygen Demand	3,720	**
Suspended Solids - Total	1,720	--
Dissolved Solids - Total	13,000	--
Phosphorus - Total	3.6	51.9

COMMENTS:

Effluent quality met Ministry requirements. A new Control Order is to be negotiated and issued in early 1985.

\* Expired Control Order and "Guidelines for the Control of Industrial Phosphorus Discharges in Liquid Effluents" -  
MOE October 1976.

\*\* A ROD requirement of 35,000 kg/day (approx.) is applicable to the combined effluents of all three Abitibi-Price  
Mills. This  
limit and the phosphorus guideline were met.

2515g/13  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000860007

MOE REGION: Northwest

DISTRICT: Thunder Bay

COMPANY NAME Abitibi-Price Inc.  
PLANT LOCATION: Thunder Bay Division  
Thunder Bay

INDUSTRIAL ACTIVITY: Pulp and Paper Mill  
(Newsprint)

PROCESS TYPE: Logs are made into newsprint by the  
stone groundwood and sulphite pulping  
processes.

DISCHARGE TYPE: continuous surface

RECEIVING WATERBODY: DIRECT: Lake Superior (Thunder Bay)

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 31,300

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	17,900	**
Suspended Solids - Total	1,120	--
Dissolved Solids - Total	51,000	--
Phosphorus - Total	9.1	31.3

COMMENTS:

Effluent quality met Ministry requirements. A new Control Order is to be negotiated and issued in early 1985.

\* Expired Control Order and "Guidelines for the Control of Industrial Phosphorus Discharges in Liquid Effluents" -  
MOE October, 1976

\*\* A ROD requirement of 35,000 kg/day (approx.) is applicable to the combined effluents of all three Abitibi-Price  
Mills. This limit and the phosphorus guideline were met.

2515g/12  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000140202

MOE REGION: Northwest

DISTRICT: Thunder Bay

COMPANY NAME Domtar Packaging Ltd.  
& PLANT LOCATION: Red Rock

INDUSTRIAL ACTIVITY: Kraft Pulp and Paper Mill

PROCESS TYPE: Logs and chips are made into newsprint and linerboard by the groundwood and kraft processes.

DISCHARGE TYPE: continuous surface

RECEIVING WATERBODY: DIRECT: Lake Superior (Nipigon Bay)

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 93,300

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	16,500	22,000
Suspended Solids - Total	4,950	4,800
Dissolved Solids - Total	57,800	--
Phosphorus - Total	24.9	93.3

COMMENTS:

Effluent quality met the Biochemical Oxygen Demand requirement and phosphorus guideline and marginally exceeded the Total Suspended Solids limit. The effluent also met the federal toxicity requirement on most but not all occasions. Existing Control Order expires December 31, 1984.

\* Existing Control Order and "Guidelines for the Control of Industrial Phosphorus Discharges in Liquid Effluents" - MOE October, 1976.

2515g/15  
84/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000830000

MOE REGION: Northwest

DISTRICT: Thunder Bay

COMPANY NAME Kimberly-Clark of Canada Ltd.  
PLANT LOCATION: Terrace Bay

INDUSTRIAL ACTIVITY: Kraft Pulp Mill

PROCESS TYPE: Logs are made into pulp by the kraft  
pulping process

DISCHARGE TYPE: continuous surface

RECEIVING WATERBODY: DIRECT: Blackbird Creek

INDIRECT: Lake Superior (Jackfish Bay)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 131,000

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	36,100	45,000
Suspended Solids - Total	6,500	8,500
Dissolved Solids - Total	180,000	--
Phosphorus - Total	67.9	131

COMMENTS:

Effluent quality met Ministry requirements. The existing Control Order which expires December 31, 1987, includes measures to further improve effluent quality (BOD to be reduced to 40 kg/ADMT by Sept. 30, 1984 and to 30 kg/ADMT by Oct. 31, 1986), to produce an effluent non-lethal to fish (1986) and to submit a proposal for improved effluent dispersion (1984).

\* Existing Control Order and "Guidelines for the Control of Industrial Phosphorus Discharges in Liquid Effluents" MOE October, 1976

2515g/19  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000850008 MOE REGION: Northwest DISTRICT: Thunder Bay

COMPANY NAME James River Marathon Ltd.  
& PLANT LOCATION: (formerly American Can)  
Marathon

INDUSTRIAL ACTIVITY: Kraft Pulp and Paper Mill

PROCESS TYPE: Pulp is produced from chips by the kraft  
pulping process

DISCHARGE TYPE: continuous surface

RECEIVING WATERBODY: DIRECT: Lake Superior

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 70,300

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	13,500	45 kg/ADMT of Product
Suspended Solids - Total	7,140	--
Dissolved Solids - Total	85,100	--
Phosphorus - Total	22.2	70.3

COMMENTS:

Effluent met current Ministry requirements. Existing Control Order requires further stepwise reductions in Total Suspended Solids and Biochemical Oxygen Demand as follows: BOD to 35 kg/ADMT by Dec. 31, 1986 and 30 kg/ADMT by Dec. 31, 1989 and S.S. to 9,000 kg/day by Dec. 31, 1984 (met in 1983), 6,000 kg/day by Dec. 31, 1985 and 4,000 kg/day by June 30, 1988. The Order also requires compliance with the federal toxicity requirement.

\* Existing Control Order and "Guidelines for the Control of Industrial Phosphorus Discharges in Liquid Effluents" - MOE October, 1976

2515g/18  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY

1983

IMIS NUMBER: 0000040006

MOE REGION: Northeast

DISTRICT: Sault Ste. Marie

COMPANY NAME The Algoma Steel Corporation Ltd.

& PLANT LOCATION: Sault Ste. Marie

INDUSTRIAL ACTIVITY: Metallurgical Coke,  
Primary Iron and Steel Producer

PROCESS TYPE: Iron (blast furnaces & foundry) and steel  
(Basic Oxygen Furnaces) are made  
from coal (coke) and iron concentrates/pellet.

DISCHARGE TYPE: continuous; 7 outfalls; terminal basin discharges through a submerged diffuser

RECEIVING WATERBODY: DIRECT: St. Mary's River

INDIRECT:

AVERAGE ANNUAL

EFFLUENT FLOW (CUBIC METRES/DAY): Total Complex 539,000; Terminal Basin 351,000; Cold Mill Sewer 9090

PARAMETER DESCRIPTION	LOAD (KG/DAY)			TARGET LOAD (KG/DAY)
	TOTAL COMPLEX	TERMINAL BASIN	COLD MILL SEWER	TERMINAL* BASIN
Suspended Solids - Total	7,857	5,973	154	-
Cyanide - Free	129	56	-	35.1
Nitrogen - Ammonium	3,257	3,162	-	35.1
Phenolics - Total	102	100	-	113
Zinc - Filtered	21	-	-	-
Iron - Total	3,494	2,811	364	-
Iron - Dissolved	382	-	382	-
Sulphides	74	74	-	35.1
Sulphates	1,254	-	-	-
Solvent Extractables	1,727	1,405	173	-
Dissolved Solids - Total	46,320	31,974	1,927	-

COMMENTS:

The existing Control Order issued in June, 1982 and amended in June, 1983 establishes the following abatement schedule and limits:

- Terminal Basin - Mar. 31, 1987 Sulphides 0.2 mg/L; Ammonia and cyanide limited in combination based on toxicity considerations
- Mar. 31, 1988 Solvent Extractables 2727 kg/day; susp. solids 8750 kg/day
- Jun. 30, 1989 Phenolics 22.7 kg/day
- Mar. 31, 1990 Solvent Extractables 1364 kg/day; susp. solids 6136 kg/day

Cold Mill Sewer- April 5, 1986 Susp. Solids 15 mg/L; Solvent Extractables 15 mg/L; Dissolved Iron 1 mg/L

\* Expired Control Order

2515g/10/85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000860304 MOE REGION: Northeast DISTRICT: Sault Ste. Marie

COMPANY NAME St. Marys Paper Inc.  
& PLANT LOCATION: Sault Ste. Marie

OWNERSHIP CHANGED  
TO (June 1, 1984) Formerly known as: Abitibi Paper Company Ltd.

INDUSTRIAL ACTIVITY: Paper Mill (Groundwood Specialty) PROCESS TYPE: Purchased Kraft pulp is added to the pulp made by the stone groundwood process to make groundwood paper specialties.

DISCHARGE TYPE: Continuous through a submerged diffuser

RECEIVING WATERBODY: DIRECT: St. Mary's River INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CURIC METRES/DAY): 30,400

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	3,400	4,800
Biochemical Oxygen Demand	5,900	5,300

COMMENTS:

Controls completed in early 1983 resulted in compliance with the BOD requirement. BOD loading for the final 7 months of the year averaged 4560 kg/day.

2515g/11  
85/01/31



ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001680008                      MOE REGION: Northeast                      DISTRICT: Sault Ste. Marie

COMPANY NAME Denison Mines Ltd.  
& PLANT LOCATION: Elliot Lake

INDUSTRIAL ACTIVITY: Uranium Mine  
(Mining/Milling)                      PROCESS TYPE: Ore is mined and milled or separated into  
tailings and concentrates. Ammonia - based  
compounds are used in the recovery of  
uranium.

DISCHARGE TYPE:

RECEIVING WATERBODY: DIRECT: Serpent River                      INDIRECT: 70 km to Lake Huron (North Channel)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 23,500

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>	
Phosphorus	2.1	23.1	
Suspended Solids - Total	58.8	347	
Dissolved Solids - Total	65,800	-	
Nitrogen - Ammonia	1,310	-	
Radium 226 - Total	0.95	1.0	becquerels/L

COMMENTS:

Effluent quality met Ministry guidelines. The Ministry and the company are investigating effluent targets and treatment systems for optimally regulating effluent pH levels so as to limit toxicity. The radioactivity limit is that set by Canada's Atomic Energy Control Board.

\* "Guidelines for Environmental Control in the Ontario Mineral Industry" - October, 1981

2515g/5  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001670207 MOE REGION: Northeast DISTRICT: Sault Ste. Marie

COMPANY NAME Rio Algom Ltd. (Panel Mill)  
& PLANT LOCATION: Elliot Lake

INDUSTRIAL ACTIVITY: Uranium Mine  
(Mining/Milling) PROCESS TYPE: Ore is mined and milled or separated  
into tailings and concentrates.

DISCHARGE TYPE:

RECEIVING WATERBODY: DIRECT: Serpent River INDIRECT: 60 km to Lake Huron (North Channel)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 8,920

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>	
Phosphorus	0.36	8.92	
Suspended Solids - Total	26.7	134	
Dissolved Solids - Total	19,142	-	
Nitrogen - Ammonia	32.6	-	
Radium 226 - Total	0.26	1.0	
Sulphates	11,055	-	becquerals/L
Copper - Total	0.12	)	
Nickel - Total	0.18	) 8.92	
Lead - Total	0.32	)	
Zinc - Total	0.13	)	

COMMENTS:

Effluent quality met Ministry effluent guidelines. Radioactivity limit was set by Canada's Atomic Energy Control Board.

\* "Guidelines For Environmental Control in the Ontario Mineral Industry" - October, 1981

2515g/9  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001670108                      MOE REGION: Northeast                      DISTRICT: Sault Ste. Marie

COMPANY NAME Rio Algom Ltd. (Quirke Mill)  
& PLANT LOCATION: Elliot Lake

INDUSTRIAL ACTIVITY: Uranium Mine                      PROCESS TYPE: Ore is mined and milled or separated into  
(Mining/Milling)                      tailings and concentrates. Ammonia - based  
compounds are used in recovery of uranium

DISCHARGE TYPE:

RECEIVING WATERBODY: DIRECT: Serpent River                      INDIRECT: 67 km to Lake Huron (North Channel)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 22,900

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>	
Phosphorus	0.5	22.9	
Suspended Solids - Total	320	344	
Dissolved Solids - Total	55,338	-	
Nitrogen - Ammonia	1,132	-	
Radium 226 - Total	0.56	1.0	becquerals/L
Sulphates	33,945	-	
Copper - Total	1.12	)	
Nickel - Total	1.47	)22.9	
Lead - Total	0.85	)	
Zinc - Total	0.76	)	

COMMENTS:

Effluent quality met all Ministry guidelines. The Ministry and the company are investigating targets and treatment systems for optimally regulating effluent pH levels so as to limit toxicity. Radioactivity limit was set by Canada's Atomic Energy Control Board.

\* Guidelines for Environmental Control in the Ontario Mineral Industry" - October, 1981

2515g/8  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000980003

MOE REGION: Northeast

DISTRICT: Sudbury

COMPANY NAME E. R. Eddy Forest Products Ltd.  
PLANT LOCATION: Espanola

INDUSTRIAL ACTIVITY: Kraft Pulp and Paper Mill

PROCESS TYPE: Logs and chips are converted  
by the kraft pulping process into  
paper and pulp.

DISCHARGE TYPE: continuous at shore

RECEIVING WATERBODY: DIRECT: Spanish River

INDIRECT: 47 km. to Lake Huron (North Channel)

AVERAGE ANNUAL  
EFFLUENT FLOW (CURIC METRES/DAY): 94,100

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	13,900	24,800
Suspended Solids - Total	5,940	14,500
Dissolved Solids	106,282	-

COMMENTS:

Effluent loading met Ministry requirements. Since secondary treatment system was put on stream ahead of schedule in August, 1983, the Biochemical Oxygen Demand load has been reduced to below the new requirement of 3630 kg/day specified for attainment by December 31, 1983 in the May, 1980 Control Order.

\* "Federal Pulp and Paper Effluent Regulations and Guidelines" - 1971

2515g/4

85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001700004

MOE REGION: Northeast

DISTRICT: Sudbury

COMPANY NAME Falconbridge Ltd.

& PLANT LOCATION: Falconbridge,

INDUSTRIAL ACTIVITY: Nickel and Copper Producer

PROCESS TYPE: Converts ore into matte

DISCHARGE TYPE: Continuous decant flow from main tailings area

RECEIVING WATERBODY: DIRECT: Coniston Creek to Wanapitei River INDIRECT: 80 km. to Lake Huron (Georgian Bay)

AVERAGE ANNUAL

EFFLUENT FLOW (CUBIC METRES/DAY): 29,800

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Suspended Solids - Total	348	447
Sulphates	12,700	-
Iron	16.7	29.8
Nickel	31.7	)
Copper	0.95	)29.8
Phosphorus	3.0	4.5

COMMENTS:

Plant was shutdown from July, 1982 to January 1983. Effluent quality met three of the four Ministry requirements. Copper/Nickel marginally exceeded the guideline.

\* "Guideline for Environmental Control in the Ontario Mineral Industry" - October 1981

2515g/3  
85/02/07

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001700103

MOE REGION: Northeast

DISTRICT: Sudbury

COMPANY NAME Falconbridge Ltd.  
& PLANT LOCATION: Onaping Mine  
Onaping Falls

INDUSTRIAL ACTIVITY: Nickel Copper Producer

PROCESS TYPE: Ore is mined and separated into tailings and concentrates.

DISCHARGE TYPE: Intermittent (7 months) mine water decant

RECEIVING WATERBODY: DIRECT: Moose Lk. to Onaping River  
to Vermillion River  
to Spanish River

INDIRECT: 125 km to Lake Huron (North Channel)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 2,060 (during 7 operating months)

PARAMETER	DESCRIPTION
1	1
2	2
3	3
4	4
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8	8
9	9
10	10
11	11
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95	95
96	96
97	97
98	98
99	99
100	100

LOAD  
(KG/DAY)

TARGET LOAD\*  
(KG/DAY)

Suspended Solids - Total  
Iron  
Nickel

$$\begin{array}{r} - \\ 0.11 \\ 3.84 \end{array}$$

30.9  
2.06  
2.06

COMMENTS:

The mine was shutdown throughout 1983, however, discharge from the treatment system continued from January to July. The Ministry is reviewing the system operation with the company to determine possible improvement measures.

\* "Guidelines for Environmental Control in the Ontario Mineral Industry" - October, 1981

2515g/6  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001700301 MOE REGION: Northeast DISTRICT: Sudbury

COMPANY NAME Falconbridge Ltd.  
PLANT LOCATION: Moose Lake Wastewater Treatment System

INDUSTRIAL ACTIVITY: Nickel and Copper Producer PROCESS TYPE:

DISCHARGE TYPE: Intermittent (9 months)

RECEIVING WATERBODY: DIRECT: Moose Lk. to Onaping R. to Vermillion R. to Spanish R. INDIRECT: 125 km. to Lake Huron (North Channel)

AVERAGE ANNUAL EFFLUENT FLOW (CUBIC METRES/DAY): 74,200 (based on 9 months)

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD* (KG/DAY)</u>
Iron - Total	10.2	74.2
Nickel - Total	117	74.2

COMMENTS:

No discharge January, July and August. Major changes were made during 1983 in the collection of runoff waters and a Ministry control program is in place for the phased reduction of nickel levels. This program extends to 1988.

\* "Guidelines for Environmental Control in the Ontario Mineral Industry" - October, 1981

2515g/97  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001690700 MOE REGION: Northeast DISTRICT: Sudbury

COMPANY NAME INCO Ltd.  
PLANT LOCATION: Garson Mine

INDUSTRIAL ACTIVITY: Nickel and Copper Producer PROCESS TYPE: Mining and crushing of ore

DISCHARGE TYPE: Continuous from mine water treatment system

RECEIVING WATERBODY: DIRECT: Junction Creek to Vermillion River to Spanish River INDIRECT: 86 km. to Lake Huron (North Channel)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 2,680

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Suspended Solids - Total	16.7	40.2
Ammonia Nitrogen	3.68	26.8
Iron - Total	-	2.68
Nickel - Total	3.07	)
Copper - Total	0.31	)2.68
Zinc - Total	0.28	)

COMMENTS:

The discharge met Ministry concentration guidelines except for the limit on combined discharges of nickel, copper and zinc. Production at the mine had been shut down from June, 1982 to April, 1983 and mine start-up problems contributed to heavier metals loads over the March to June period.

\* "Guidelines for Environmental Control in the Ontario Mineral Industry" - October, 1981

2515g/96  
85/01/31



ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001690304 MOE REGION: Northeast DISTRICT: Sudbury

COMPANY NAME INCO Ltd.  
& PLANT LOCATION: Coppercliff Creek Wastewater  
Treatment Plant

INDUSTRIAL ACTIVITY: Nickel/Copper mining and milling PROCESS TYPE:

DISCHARGE TYPE: Continuous

RECEIVING WATERBODY: DIRECT: Junction Creek to Vermillion  
River to Spanish River INDIRECT: 70 km. to Lake Huron (North Channel)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 110,000

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Suspended Solids - Total	1,170	1,650
Ammonia Nitrogen	969	1,100
Iron - Total	101	)
Nickel - Total	95.0	) 110
Copper - Total	15.4	)

COMMENTS:

The discharge met Ministry requirements. Treatment plant operation and discharge continued although there was a general production shutdown from June 1982 to April, 1983.

\* "Guidelines for Environmental Control in the Ontario Mineral Industry" - October, 1981

2515g/98  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001690502 MOE REGION: Northeast DISTRICT: Sudbury

COMPANY NAME INCO LTD. Sulphur Products Dept.  
& PLANT LOCATION: Sudbury (Copper Cliff)

INDUSTRIAL ACTIVITY: Sulphuric Acid Production PROCESS TYPE: Acid is produced in the catalytic bed process from nickel refinery SO<sub>2</sub> emissions and pyrrhotite roasting.

DISCHARGE TYPE: Continuous

RECEIVING WATERBODY: DIRECT: Kelly Lake to Junction Creek to Vermillion River to Spanish River INDIRECT: 62 km. to Lake Huron (North Channel)

AVERAGE ANNUAL EFFLUENT FLOW (CUBIC METRES/DAY): 1,180

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD* (KG/DAY)</u>
Dissolved Solids - Total	3,460	-
Sulphate	2,140	-
Nickel	0.28	1.18
Iron	1.06	1.18

COMMENTS:

The effluent quality met discharge guidelines.

\* Objectives for the Control of Industrial Waste Discharges in Ontario"

2515g/7  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001690601 MOE REGION: Northeast DISTRICT: Sudbury

COMPANY NAME INCO Ltd.  
PLANT LOCATION: Nolin Creek Wastewater Treatment Plant

INDUSTRIAL ACTIVITY: Nickel/Copper mining and milling PROCESS TYPE:

DISCHARGE TYPE: Continuous

RECEIVING WATERBODY: DIRECT: Nolin Creek to Junction Creek to Vermillion River to Spanish River INDIRECT: 77 km. to Lake Huron (North Channel)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 10,500

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Suspended Solids - Total	122	158
Ammonia Nitrogen	54.9	105
Iron - Total	7.86	10.5
Nickel - Total	5.21	)
Copper - Total	2.63	)10.5
Zinc - Total	1.53	)

COMMENTS:

The discharge met Ministry requirements. Treatment plant operation and discharge continued even though there was a general production shutdown from June, 1982 to April, 1983.

\* "Guidelines for Environmental Control in the Ontario Mineral Industry" - October, 1981

2515g/99  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001530005 MOE REGION: Northeast DISTRICT: North Bay

COMPANY NAME MacMillan Bloedel Limited  
PLANT LOCATION: Sturgeon Falls Division  
Sturgeon Falls

INDUSTRIAL ACTIVITY: Hardboard Construction Products  
and corrugating medium are produced

PROCESS TYPE: Two different processes are used. Chips  
are thermal refined and glued to form hard  
board products. Chips are converted by the  
neutral sulphite semi-chemical process  
into corrugating medium.

DISCHARGE TYPE: Continuous, seven days a week.

RECEIVING WATERBODY: DIRECT: Sturgeon River to Lake Nipissing  
to French River Main Channel INDIRECT: 124 km to Lake Huron (Georgian Bay)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 12,950

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Biochemical Oxygen Demand	58,500	-
Suspended Solids - Total	2,300	3,300 (2,900 - 30 consecutive operating day avg.)

COMMENTS:

The mill operated in compliance with the suspended solids discharge requirements of a November, 1982 Control Order. A December, 1983 Amendment further requires the company to limit oxygen - demanding discharges so as to maintain a minimum 47% dissolved oxygen saturation level in the Sturgeon River at all times and to conduct a research program (completion by October 30, 1987) leading to application (by December, 1987) for a Certificate of Approval for treatment works capable of achieving the maximum practicable reduction of BOD and to within 12 months of issuance of the certificate have these works in operation. Additionally, the order requires the company to submit by December 31, 1989 terms of reference for a study of further measures to reduce BOD loading to 10 tonnes/day (on any day) and to meet Ministry fish toxicity requirements.

2515g/102  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001840107 MOE REGION: Southwest DISTRICT: Owen Sound

COMPANY NAME Ontario Hydro Bruce N.P.D.S.  
& PLANT LOCATION: Domestic Sewage Treatment Plant  
Tiverton

INDUSTRIAL ACTIVITY: Plant treats sanitary wastes from the generating station complex PROCESS TYPE:

DISCHARGE TYPE:

RECEIVING WATERBODY: DIRECT: Lake Huron

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 2216

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorus	1.36	2.22

COMMENTS:

Effluent quality met the phosphorus guideline.

2515g/10l  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001840107 MOE REGION: Southwest DISTRICT: Owen Sound

COMPANY NAME Ontario Hydro Bruce N.P.D.S.  
& PLANT LOCATION: Heavy Water Plant  
Tiverton

INDUSTRIAL ACTIVITY: Heavy water is produced for  
use in nuclear reactors

PROCESS TYPE:

DISCHARGE TYPE:

RECEIVING WATERBODY: DIRECT: Lake Huron

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 2,890,000

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Sulphides	17.6	215

COMMENTS:

Discharge quality met the sulphide guideline.

2515g/85  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000140707

MOE REGION: Southwest

DISTRICT: Clinton (Sub-office)

COMPANY NAME Duntar Chemicals Ltd.

PLANT LOCATION: Sifton Salt Division  
Goderich

INDUSTRIAL ACTIVITY: Table salt plant

PROCESS TYPE: Salt is mined and purified for use.

DISCHARGE TYPE: continuous

RECEIVING WATERBODY: DIRECT: Maitland River

INDIRECT: Lake Huron

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 11,600

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Dissolved Solids - Total	82,200	--
Chlorides	41,100	--

COMMENTS:

Environmental impact of chloride discharge on the Maitland River is being reassessed to determine if loading reduction is required.

2515g/40  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMTS NUMBER: 0000910109      MOE REGION: Southwest      DISTRICT: Sarnia

COMPANY NAME      Dow Chemical Canada Inc.  
& PLANT LOCATION:      Sarnia

INDUSTRIAL ACTIVITY: Chlorinated compound manufacture      PROCESS TYPE: Using brine and feed from the petroleum refineries a wide range of chlorine related products are made.

DISCHARGE TYPE: continuous through nine outfalls

RECEIVING WATERBODY: DIRECT: St. Clair River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 745,000

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	2,300	11,200
Phenolics - Total	2.0	15
Total Organic Carbon	880	-
Chloride - Total	335,000	1,125,000

COMMENTS:

Discharge quality met the Ministry, industrial effluent concentration guidelines.

2515g/53  
85/01/31



ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000070201 MOE REGION: Southwest DISTRICT: Sarnia

COMPANY NAME Esso Chemicals Canada Ltd.  
PLANT LOCATION: Sarnia

INDUSTRIAL ACTIVITY: Manufacturer of plastic resins PROCESS TYPE: Natural gas and feed from the petroleum refinery are used to make linear low molecular weight polymer.

DISCHARGE TYPE: continuous through an extended outfall

RECEIVING WATERBODY: DIRECT: St. Clair River INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 19,500

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	293	293
Phenolics - Total	0.52	0.39
Solvent Extractables	22.0	293
Nitrogen - Ammonia	10.2	195
Total Organic Carbon	198	-
Dissolved Solids - Total	1,840	-

COMMENTS:

Discharge quality met Ministry industrial effluent concentration guidelines except for phenolics. The company has made significant progress in controlling phenolics emissions (87% reduction since 1973) and this exceedance was primarily due to process upsets in March and November. The company is proceeding with plans to further isolate higher strength phenolics sources and direct these waste streams to the biox plant. Compliance is expected in 1984.

2515g/45  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000070102

MOE REGION: Southwest

DISTRICT: Sarnia

COMPANY NAME Esso Petroleum Canada  
& PLANT LOCATION: Sarnia

INDUSTRIAL ACTIVITY: Petroleum Refinery

PROCESS TYPE: Crude oil is converted into a wide range  
of petroleum products.

DISCHARGE TYPE: continuous through three outfalls

RECEIVING WATERBODY: DIRECT: St. Clair River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 215,000

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	(0)*	3,225
Phenolics - Total	0.68	4.3
Solvent Extractables	10.0	2,150
Nitrogen - Ammonium	81.0	2,150
Total Organic Carbon	744	-
Dissolved Solids - Total	11,700	-

COMMENTS:

Discharge quality met the Ministry Petroleum Refineries effluent concentration guidelines.

2515g/44 \* Intake exceeds discharge  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER:

MOE REGION: Southwest

DISTRICT: Sarnia

COMPANY NAME      Fiberglas Canada Inc.  
& PLANT LOCATION:      Sarnia

INDUSTRIAL ACTIVITY: Manufacture of glass wool insulation      PROCESS TYPE: insulation is produced from silicate sands

DISCHARGE TYPE: Continuous

RECEIVING WATERBODY: DIRECT: Cole Drain

INDIRECT: St. Clair River

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 6,990

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Phenolics - Total	0.10	0.14

COMMENTS:

Discharge quality met the Ministry industrial effluent concentration guideline.

2515g/95  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000480004

MOE REGION: Southwest

DISTRICT: Sarnia

COMPANY NAME Petrosar Ltd.  
& PLANT LOCATION: Corunna

INDUSTRIAL ACTIVITY: Petroleum refinery

PROCESS TYPE: Primary function to provide feedstock  
for Dupont, Polymer and Union Carbide.

DISCHARGE TYPE: continuous through a submerged diffuser

RECEIVING WATERBODY: DIRECT: St. Clair River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 8,930

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	106	134
Phenolics - Total	0.40	0.18
Solvent Extractables	18.1	89.3
Nitrogen - Ammonia	14.5	89.3
Total Organic Carbon	122	-
Dissolved Solids - Total	11,000	-

COMMENTS:

Discharge quality met the Ministry Petroleum Refinery Effluent concentration Guidelines except for phenolics. Extensive water recycle at this refinery results in a low volume discharge but conversely makes it more difficult to meet the concentration limits. The phenolics exceedance was primarily a result of upset conditions in July and the company is investigating in plant changes for improved control of phenolic emissions.

2515g/50  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000030007

MOE REGION: Southwest

DISTRICT: Sarnia

COMPANY NAME Polysar Ltd.

PLANT LOCATION: Sarnia

INDUSTRIAL ACTIVITY: Synthetic rubber manufacture

PROCESS TYPE: Feedstock from refineries in the Sarnia area are converted into several grades of synthetic rubber

DISCHARGE TYPE: continuous through five outfalls

RECEIVING WATERBODY: DIRECT: St. Clair River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 290,000

PARAMETER  
DESCRIPTION

LOAD  
(KG/DAY)

TARGET LOAD  
(KG/DAY)

Suspended Solids - Total  
Phenolics - Total  
Solvent Extractables  
Nitrogen - Ammonia  
Total Organic Carbon  
Chemical Oxygen Demand

1,890  
1.37  
25.5  
272  
4,060  
8,850

3,620  
4.5  
181  
2,900  
-  
8,170

COMMENTS:

Discharge quality met all Ministry requirements set by Control Order and based on MOE industrial effluent concentration guidelines except for Chemical Oxygen Demand. After the company brought the new biox treatment plant into operation in May 1983 the average COD load was reduced to 4,650 kg/day. COD loading has been reduced by more than 65% since 1978.

2515g/38  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000490102 MOE REGION: Southwest DISTRICT: Sarnia

COMPANY NAME Suncor Sunoco Group  
& PLANT LOCATION: Sarnia

INDUSTRIAL ACTIVITY: Petroleum refinery

PROCESS TYPE: Crude oil is converted into a wide range  
of petroleum products.

DISCHARGE TYPE: continuous at shore

RECEIVING WATERBODY: DIRECT: St. Clair River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CURIC METRES/DAY): 80,300

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	67.3	1,200
Phenolics - Total	0.77	1.61
Solvent Extractables	24.3	803
Nitrogen - Ammonia	30.3	803

COMMENTS:

Discharge quality met the Ministry Petroleum Refinery Effluent concentration guidelines.

2515g/51  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMTS NUMBER: 0000080309

MOE REGION: Southwest

DISTRICT: Sarnia

COMPANY NAME Dupont Canada Inc.  
& PLANT LOCATION: Corunna

INDUSTRIAL ACTIVITY: Plastic Resin Manufacturer

PROCESS TYPE: Feedstock (ethylene) from the petroleum refineries in Sarnia is used to make plastics.

DISCHARGE TYPE: continuous at shore

RECEIVING WATERBODY: DIRECT: St. Clair River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 45,000

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phenolics - Total	0.3	0.90

COMMENTS:

Discharge quality met Ministry industrial effluent concentration guidelines.

2515g/46  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000120006      MOE REGION: Southwest      DISTRICT: Sarnia

COMPANY NAME Ethyl Canada Inc.  
& PLANT LOCATION: Corunna

INDUSTRIAL ACTIVITY: Automobile fuel additive manufacturer      PROCESS TYPE: Tetraethyl lead is made from a lead-sodium alloy and ethyl chloride.

DISCHARGE TYPE: continuous through an extended outfall

RECEIVING WATERBODY: DIRECT: St. Clair River      INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 40,500

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Lead - Total	61.7	40.5

COMMENTS:

While the discharge of lead has been reduced by approx. 40% since 1978 recurring problems in the treatment system prevented achievement of the Ministry's concentration guideline for lead discharges. The company is continuing its investigation of alternatives for reducing this load.

2515g/47  
85/01/31



ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000380105

MOE REGION: Southwest

DISTRICT: Sarnia

COMPANY NAME Union Carbide Canada Ltd.

& PLANT LOCATION: Corunna

INDUSTRIAL ACTIVITY: Manufacturer of plastic resins

PROCESS TYPE: Feedstock from neighbouring petroleum refineries is converted into polyethylene resins.

DISCHARGE TYPE: batch discharge through an extended outfall

RECEIVING WATERBODY: DIRECT: St. Clair River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 2,470

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	111	37.1
Phosphorous - Total	1.37	4.5
Dissolved Solids - Total	508	-
Total organic Carbon	23.2	-

COMMENTS:

The discharge exceeded the Ministry's guideline for suspended solids which is attributed to resuspension of silt and clay deposits in the treatment lagoon system. The company is investigating potential options for reducing solids inputs.

2515g/48  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000510107      MOE REGION: Southwest      DISTRICT: Sarnia

COMPANY NAME      Shell Canada Ltd.  
& PLANT LOCATION:      Corunna

INDUSTRIAL ACTIVITY: Petroleum refinery      PROCESS TYPE: Crude oil is converted into a wide range of petroleum products

DISCHARGE TYPE: continuous through two outfalls

RECEIVING WATERBODY: DIRECT: Talford Creek      INDIRECT: St. Clair River

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 230,000

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	(0)*	3,450
Phenolics - Total	0.72	4.6
Solvent Extractables	72.1	2,300
Nitrogen - Ammonia	(0)*	2,300
Total organic carbon	378	-

COMMENTS:

Discharge quality met the Ministry Petroleum Refinery Effluent concentration guidelines.

2515g/52 \* Intake exceeded discharge  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000390203 MOE REGION: Southwest DISTRICT: Sarnia

COMPANY NAME Canadian Industries Ltd.  
PLANT LOCATION: Lambton Works  
Courtright

INDUSTRIAL ACTIVITY: Fertilizer producer

PROCESS TYPE: Sulphuric acid, phosphate ore and  
nitrogen are converted into  
several grades of fertilizer.

DISCHARGE TYPE: continuous at shore

RECEIVING WATERBODY: DIRECT: St. Clair River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 298,000

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorous - Total	18.1	298
Nitrogen - Ammonium	246	298
Flouride	30.9	-

COMMENTS:

Discharge quality met the Ministry industrial effluent concentration guidelines.

2515g/49  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001060003 MOE REGION: Southwest DISTRICT: Windsor

COMPANY NAME Windsor Rumper Company  
PLANT LOCATION: A Division of Gulf & Western (Canada) Ltd.  
Windsor

INDUSTRIAL ACTIVITY: Metal Plating

PROCESS TYPE: Steel parts for the automobile industry  
are plated with nickel.

DISCHARGE TYPE: continuous five days a week through diffuser

RECEIVING WATERBODY: DIRECT: Little River

INDIRECT: 3.3 km to Detroit River

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 1,990

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Suspended Solids - Total	27.3	29.9
Iron - Total	0.7	33.8
Nickel - Total	1.77	1.99

COMMENTS:

Effluent quality met Ministry requirements which were set by MOE's industrial effluent concentration guidelines.

2515g/94  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001040005      MOE REGION: Southwest      DISTRICT: Windsor

COMPANY NAME Canadian Salt Company Ltd.  
& PLANT LOCATION: Windsor

INDUSTRIAL ACTIVITY: Table salt mine

PROCESS TYPE: Salt is mined and prepared for use.

DISCHARGE TYPE: continuous through a submerged diffuser

RECEIVING WATERBODY: DIRECT: Detroit River

INDIRECT: Lake Erie

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 18,900

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Chlorides	13,500	-
Dissolved Solids - Total	22,400	-

COMMENTS:

2515g/43  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000060004 MOE REGION: Southwest DISTRICT: Windsor

COMPANY NAME Chrysler Canada Ltd.  
PLANT LOCATION: Windsor

INDUSTRIAL ACTIVITY: Automobile assembly PROCESS TYPE:

DISCHARGE TYPE: continuous five days a week (8 a.m. to 5 p.m.) through an open outfall

RECEIVING WATERBODY: DIRECT: Grand Marais Creek INDIRECT: Detroit River; Lake Erie

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 8,750

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorous - Total	43.4	8.75
Suspended Solids - Total	102	131
Solvent Extractables	42.2	131

COMMENTS:

Effluent requirement for phosphorus was not met. Beginning in 1984, the treated discharge was connected to the City of Windsor sewerage system which incorporates phosphorus removal facilities.

2515g/39  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000020107      MOE REGION: Southwest      DISTRICT: Windsor

COMPANY NAME Ford Motor Co. of Canada Ltd.  
& PLANT LOCATION: Windsor

INDUSTRIAL ACTIVITY: Automobile engine and transmission manufacture      PROCESS TYPE: Engine block and parts are cast in the iron foundry; parts are machined and assembled into engines and transmissions.

DISCHARGE TYPE: continuous five days a week through a submerged outfall

RECEIVING WATERBODY: DIRECT: Detroit River      INDIRECT: Lake Erie

AVERAGE ANNUAL EFFLUENT FLOW (CUBIC METRES/DAY): 83,300

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Suspended Solids - Total	3,390	1,250
Phenolics - Total	13.4	1.67
Iron - Total	256	1,410

COMMENTS:

Effluent quality met total iron guidelines but exceeded phenolics and total suspended solids limits. Company has eliminated some high phenol wastestreams and continues to investigate for others. The waste treatment plant appears to be at capacity with respect to suspended solids, including iron. Two sources of suspended solids have been eliminated and alternatives to reduce these loadings are continuing. Target Loads were set by MOE industrial effluent concentration guidelines.

2515g/37  
84/10/16

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000010009

MOE REGION: Southwest

DISTRICT: Windsor

COMPANY NAME Allied Chemical Canada Inc.  
PLANT LOCATION: Amherstburg

INDUSTRIAL ACTIVITY: Manufacture of soda ash

PROCESS TYPE: Soda ash (sodium carbonate) is  
made from table salt (sodium chloride).

DISCHARGE TYPE: continuous through a submerged diffuser

RECEIVING WATERBODY: DIRECT: Detroit River

INDIRECT: Lake Erie

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 139,000

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	2,080	2,085
Dissolved Solids - Total	676,000	--
Chlorides	371,000	700,000
Nitrogen - Ammonium	60.6	209

COMMENTS:

Effluent quality met Ministry target loads which are based on MOE's industrial effluent concentration guidelines.

2515g/36  
85/01/31



ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001020007 MOE REGION: Southwest DISTRICT: Windsor

COMPANY NAME H. J. Heinz Company of Canada Ltd.  
& PLANT LOCATION: Leamington

INDUSTRIAL ACTIVITY: Vegetable processor

PROCESS TYPE: A wide variety of food products are  
made from produce grown locally.

DISCHARGE TYPE: continuous through an open outfall

RECEIVING WATERBODY: DIRECT: Selkirk Drain

INDIRECT: 1.3 km Lake Erie

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 17,300

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorous - Total	8.2	17.3
Biochemical Oxygen Demand - 5 Day	182	260
Suspended Solids - Total	206	260

COMMENTS:

Effluent quality met Ministry target loads which are based on MOE's industrial effluent concentration guidelines.

2515g/4l  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001050004 MOE REGION: Southwest DISTRICT: Windsor

COMPANY NAME Omstead Food Ltd.  
& PLANT LOCATION: Wheatley

INDUSTRIAL ACTIVITY: Fish and vegetable processer PROCESS TYPE: Fish is processed and vegetables grown locally are processed/frozen.

DISCHARGE TYPE: continuous, when plant is operating, through an open outfall

RECEIVING WATERBODY: DIRECT: Muddy Creek INDIRECT: 1.0 km Lake Erie

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 1,710

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorus - Total	4.0	4.5
Biochemical Oxygen Demand - 5 Day	144	25.7
Suspended Solids - Total	288	25.7

COMMENTS:

The previous phosphorus guideline exceedance has been corrected by the addition of phosphorus removal facilities. Waste treatment plant upsets occurred during the latter half of 1983 creating a non compliance situation for suspended solids and BOD. Improvements in the sludge recycle system and nutrient addition have prevented these upsets during 1984 and have reduced the suspended solids and BOD loadings. Target Loads are based on MOE's industrial effluent concentration guidelines.

2515g/42  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000520205 MOE REGION: West Central DISTRICT: Hamilton

COMPANY NAME Texaco Canada Inc. (Nanticoke Refinery)  
PLANT LOCATION: Jarvis

INDUSTRIAL ACTIVITY: Petroleum Refinery PROCESS TYPE: Crude oil is converted into a wide range of petroleum products.

DISCHARGE TYPE: continuous through a submerged diffuser

RECEIVING WATERBODY: DIRECT: Lake Erie

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 4,850

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Solvent Extractables	6.6	48.5
Phenolics - Total	0.12	0.10
Sulphides	0.32	
Nitrogen - Ammonia	13.6	48.5
Suspended Solids - Total	9.6	72.7

COMMENTS:

Effluent quality met three - solvent extractables (oil and grease), ammonia nitrogen and Total Suspended Solids - out of four Ministry guidelines. An upset in the Waste Water Treatment Plant in October 1983, caused the phenolics exceedance. Remedial action was taken. Target Loads are set by MOE Petroleum Refinery Effluent Guidelines. Best Practicable Control Technology is used at this refinery.

2515g/72  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000950105 MOE REGION: West Central DISTRICT: Hamilton

COMPANY NAME Stelco Inc. Lake Erie Works  
& PLANT LOCATION: Nanticoke

INDUSTRIAL ACTIVITY: Primary steel producer

PROCESS TYPE: Coke ovens with a by-product plant, blast furnace, basic oxygen furnace and a hot strip mill are used to make steel.

DISCHARGE TYPE: continuous through an open outfall

RECEIVING WATERBODY: DIRECT: Centre Creek

INDIRECT: 0.15 km to Lake Erie

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 27,100

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	282	392
Lead	2.3	10.5
Solvent Extractables	38.0	164.6
Cyanide	1.6	2.6
Nitrogen - Ammonia	6.2	24.8
Phenols	0.06	0.47
Iron	22.8	39.2
Zinc	2.3	15.7
Phosphorus	3.7	26.1
Chromium	0.5	6.5

COMMENTS:

All effluent requirements were met. For 1983 new requirements were set. A review of the mixing zone studies indicated that requirements could be revised without adversely impacting the receiving water quality. Requirements were set after studies of the receiving water quality and mixing zones were completed.

2515g/62  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000920009 MOE REGION: West Central DISTRICT: Cambridge

COMPANY NAME Silknit Ltd. Textile Division  
PLANT LOCATION: Cambridge

INDUSTRIAL ACTIVITY: Textile Producer PROCESS TYPE: Yarn is dyed and woven into textiles.

DISCHARGE TYPE: continuous through an open outfall

RECEIVING WATERBODY: DIRECT: Speed River to Grand River INDIRECT: 159 km to Lake Erie

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 2,650

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorus	1.1	4.5
Biochemical Oxygen Demand	31.5	27.3
Suspended Solids - Total	21.9	40.9

COMMENTS:

Effluent quality met Total Suspended Solids and phosphorus target loads but exceeded Biochemical Oxygen Demand limit. Plant ceased operation as of October, 1984.

2515g/71  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001470004

MOE REGION: West Central

DISTRICT: Cambridge

COMPANY NAME Solarware

& PLANT LOCATION: Cambridge

INDUSTRIAL ACTIVITY: Enamelled Porcelain Goods  
Manufacturer

PROCESS TYPE: Sinks, tubs, etc. are enamelled.

DISCHARGE TYPE: five day continuous flow 7 am to 6 pm through a drain

RECEIVING WATERBODY: DIRECT: Speed River to Grand River

INDIRECT: 159 km to Lake Erie

AVERAGE ANNUAL

EFFLUENT FLOW (CUBIC METRES/DAY): 390

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	13.5	6.6
Nickel	0.44	0.44
Zinc	0.04	0.44
Iron	1.07	0.44

COMMENTS:

Effluent quality met zinc and nickel guidelines but exceeded Total Suspended Solids and iron limits. In 1984 the company will begin a treatment optimization program. Target Loads set by MOE industrial effluent concentration guidelines.

2515g/79

85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001490002 MOE REGION: West Central DISTRICT: Cambridge

COMPANY NAME Tend-R-Fresh Poultry  
PLANT LOCATION: Petersburg

INDUSTRIAL ACTIVITY: Poultry processor PROCESS TYPE: Birds are slaughtered, processed, readied for retail sale.

DISCHARGE TYPE: seven day continuous flow through an open outfall

RECEIVING WATERBODY: DIRECT: Alder Creek to Nith River to Grand River INDIRECT: 195 km to Lake Erie

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 1,435

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorus	9.15	4.5
Biochemical Oxygen Demand	614	42.95
Suspended Solids - Total	570	42.95

COMMENTS:

Effluent quality exceeds Ministry guidelines. An abatement program was negotiated and initiated with the new owner to commence treatment plant modification in the fall of 1984. Target Loads set by MOE industrial effluent concentration guidelines.

2515g/77  
25/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001480003 MOE REGION: West Central DISTRICT: Cambridge

COMPANY NAME The Stanley Works Ltd.  
PLANT LOCATION: New Hamburg

INDUSTRIAL ACTIVITY: Hardware manufacturer PROCESS TYPE: Makes tools, plates hardware, etc.

DISCHARGE TYPE: five day continuous flow 7 am to 12:30 am through an open outfall

RECEIVING WATERBODY: DIRECT: Nith River to Grand River INDIRECT: 203 km to Lake Erie

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 210

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	2.7	4.43
Copper	0.02	0.3
Nickel	0.08	0.3
Chromium	0.013	0.3
Zinc	0.098	0.3
Cyanide	0.014	0.06

COMMENTS:

Effluent quality met all Ministry guidelines. Target Loads set by MOE industrial effluent concentration guidelines.

2515g/78  
85/01/31



ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001440007 MOE REGION: West Central DISTRICT: Cambridge

COMPANY NAME J. M. Schneider Inc.  
& PLANT LOCATION: Ayr

INDUSTRIAL ACTIVITY: Food processor PROCESS TYPE: Poultry is deep fried and packaged for retail sales.

DISCHARGE TYPE: seven day continuous flow through a submerged outfall

RECEIVING WATERBODY: DIRECT: Nith River to Grand River INDIRECT: 196 km to Lake Erie

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 280

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorus	2.43	4.5
Biochemical Oxygen Demand	5.1	5.46
Suspended Solids - Total	4.6	5.46
Nitrogen - Ammonium	2.8	3.64
Solvent extractives (oil & grease)	140.0	5.46

COMMENTS:

Effluent quality met Biochemical Oxygen Demand, Total Suspended Solids ammonia and phosphorus guidelines but exceeded solvent extractive limits; the 1983 loadings are lower than those in 1982. Self-monitoring began by company consultant July, 1983. Previously MOE and the Region of Waterloo did routine regular sampling. To resolve the remaining problems, an abatement program is underway in 1984. Target Loads set by MOE industrial effluent concentration guidelines.

2515g/81  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001500008 MOE REGION: West Central DISTRICT: Hamilton

COMPANY NAME International Minerals and Chemicals  
& PLANT LOCATION: Dunnville

INDUSTRIAL ACTIVITY: Fertilizer Manufacturer

PROCESS TYPE: Phosphate ore, sulphuric acid and phosphoric acid are used to make fertilizer.

DISCHARGE TYPE: continuous at shoreline

RECEIVING WATERBODY: DIRECT: Grand River

INDIRECT: 3 km to Lake Erie

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 28,500

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD*</u> <u>(KG/DAY)</u>
Phosphorus	295	28.5
Suspended Solids - Total	219	428
Fluoride	172	-

COMMENTS:

The discharge exceeded the Ministry phosphorus guideline. Company plans were approved to collect the remaining plant site surface runoff and direct it to the treatment system to meet phosphorus target loads. These plans are being implemented in 1984. The plant shutdown production beginning July, 1984, but the treatment system has been kept in operation.

\* "Guideline For The Control Of Industrial Phosphorus Discharges in Liquid Effluents" - MOE October, 1976.

2515g/70  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001600105 MOE REGION: West Central DISTRICT: Welland

COMPANY NAME INCO Metals Ltd.  
& PLANT LOCATION: Port Colborne

INDUSTRIAL ACTIVITY: Non-ferrous metals refinery

PROCESS TYPE: Electrolytic processes are used to  
recovery pure metals like nickel, copper  
silver, gold, etc.

DISCHARGE TYPE: continuous at shore

RECEIVING WATERBODY: DIRECT: Lake Erie

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 20,500

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	189	308
Nickel	11	20.5

COMMENTS:

Effluent quality met all Ministry guidelines. Suspended solids loadings have been reduced by 71% and nickel by 96% since 1978. Target Loads set by MOE industrial effluent concentration guidelines.

2515g/74  
84/11/1

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001590009      MOE REGION: West Central      DISTRICT: Welland  
COMPANY NAME Can Oxy-Durez  
PLANT LOCATION: Dunlop  
Fort Erie

INDUSTRIAL ACTIVITY: Organic chemicals producer      PROCESS TYPE: Specialty organics are made.

DISCHARGE TYPE: continuous through an open outfall

RECEIVING WATERBODY: DIRECT: Frenchmans Creek to Niagara River      INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 252

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	0.045	3.79
Suspended Solids - Total	0.72	3.79
Phenolics	0.008	0.005
Phosphorus	0.004	4.54

COMMENTS:

Effluent quality met Biochemical Oxygen Demand, Total Suspended Solids and phosphorous guidelines but not the phenolics limit. Since 1981 Phenolics load has been reduced by 80% through raw material substitution and better control. Company is reviewing possibility of discharging into the municipal sewer system. Target Loads set by MOE industrial effluent guidelines.

2515g/73  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001580000 MOE REGION: West Central DISTRICT: Welland

COMPANY NAME

PLANT LOCATION: GNR Batteries Canada Inc.  
Gould Manufacturing of Canada Ltd.  
Fort Erie

INDUSTRIAL ACTIVITY: Battery Manufacturer

PROCESS TYPE: Lead is melted and cast into  
batteries.

DISCHARGE TYPE: continuous for five days through an open outfall

RECEIVING WATERBODY: DIRECT: Frenchman's Creek to Niagara River INDIRECT:

AVERAGE ANNUAL

EFFLUENT FLOW (CUBIC METRES/DAY): 159.3

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Biochemical Oxygen Demand	2.35	2.38
Suspended Solids - Total	3.5	2.38
Lead	0.30	0.16

COMMENTS:

Effluent quality did not meet Ministry guidelines for suspended solids and lead. A surge collection system was installed in March, 1983, as part of a program to reduce Total Suspended Solids and lead discharges. This program is scheduled for completion by year end 1984, and should result in the effluent meeting the target loads. Target loads set by MOE industrial effluent concentration guidelines.

2515g/69  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001570001 MOE REGION: West Central DISTRICT: Welland

COMPANY NAME Fleet Manufacturing Company Ltd.  
& PLANT LOCATION: Gilmore  
Fort Erie

INDUSTRIAL ACTIVITY: Sonar/Aircraft Parts Manufacturer PROCESS TYPE: Fabricator of aircraft parts

DISCHARGE TYPE: continuous

RECEIVING WATERBODY: DIRECT: Frenchmans Creek to  
Niagara River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 4.4

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorus	0.002	4.54
Biochemical Oxygen Demand	0.018	0.065
Suspended Solids - Total	0.134	0.065
Chromium	0.002	0.004

COMMENTS:

The discharge met Ministry guidelines for phosphorus, BOD and chromium but exceeded the suspended solids guidelines. Since 1978 the Total Suspended Solids have been reduced each year; by 1983 loading had been reduced to 99.2% from 1978. Company is following a voluntary program and submitted for approval the design of an effluent treatment system in August 1984. Installation and commissioning to be completed in early 1985. Target Loads set by MOE industrial effluent concentration guidelines.

2515g/68  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000950204 MOE REGION: West Central DISTRICT: Welland  
COMPANY NAME Stelco Welland Tube Works  
PLANT LOCATION: Welland

INDUSTRIAL ACTIVITY: Pipe fabricator PROCESS TYPE: Flat steel is made into very large diameter pipe.

DISCHARGE TYPE: continuous through an open outfall

RECEIVING WATERBODY: DIRECT: Lyons Creek to Welland River INDIRECT:  
to Niagara River

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 54.8

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	0.39	0.821
Solvent Extractable (oil/grease)	0.12	0.821

COMMENTS:

Discharge quality met Ministry guidelines. Plant did not operate during January, February, March, July, August, September, October, November and December in 1983. Plant operated one day in April, eleven days in May, nine days in June. To ensure that fire protection system functions, water is pumped through the system and discharged. Target Loads were set by MOE industrial effluent concentration guidelines.

2515g/63  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001610005                      MOE REGION: West Central                      DISTRICT: Welland  
COMPANY NAME                      Atlas Steel Company  
PLANT LOCATION:                      Welland

INDUSTRIAL ACTIVITY: Stainless steel producer                      PROCESS TYPE: Electric furnaces are used to make various grades of stainless steel.

DISCHARGE TYPE: continuous

RECEIVING WATERBODY: DIRECT: Welland River to Niagara River                      INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 22,932

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOADS</u> <u>(KG/DAY)</u>
Phosphorus	(0)*	22.9
Biochemical Oxygen Demand	178	344
Suspended Solids - Total	4,400	344
Iron	240	115
Solvent extractives (oil/grease)	0.67	344

COMMENTS:

Effluent quality met phosphorus, Biochemical Oxygen Demand and solvent extractives requirements. Control Order expired in 1983, and company should meet all Ministry guidelines in 1984. Target Loads by MOE industrial effluent concentration guidelines.

2515g/75                      \* Intake exceeded discharge  
85/01/31



ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000950303 MOE REGION: West Central DISTRICT: Welland

COMPANY NAME Stelco Page Hersey Works  
& PLANT LOCATION: Welland

INDUSTRIAL ACTIVITY: Pipe fabricator

PROCESS TYPE: Small diameter seamless pipe is made from steel billets.

DISCHARGE TYPE: continuous through a diffuser

RECEIVING WATERBODY: DIRECT: Welland Canal

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 12,000

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	10.5	180
Solvent Extractables	30.1	180
Iron - Total	6.75	12.0

COMMENTS:

Effluent quality meets all Ministry guidelines. Target Loads are set by MOE industrial effluent concentration guidelines.

2515g/64  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001550102

MOE REGION: West Central

DISTRICT: Welland

COMPANY NAME Cyanamid Canada Inc.  
& PLANT LOCATION: Welland Plant  
Niagara Falls

INDUSTRIAL ACTIVITY: Chemical Manufacturer

PROCESS TYPE:

DISCHARGE TYPE: continuous through an open outfall

RECEIVING WATERBODY: DIRECT: Miller Creek to Welland River  
to Niagara River INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 23,300

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorus	24.5	23.3
Biochemical Oxygen Demand	337	-
Suspended Solids - Total	29	-
Nitrogen - Total	19,200	-
Nitrate	7,390	-

COMMENTS:

The Amending Control Order establishes concentration limits to be met by April 1, 1985, as follows: BOD 15 mg/L, Suspended Solids 10 mg/L, ammonia and urea 10 mg/L, nitrate 50 mg/L and phosphorus 1 mg/L. In the Fall of 1983, the company redirected a major source of ammonia discharge to a recovery system.

2515g/66  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000370304 MOE REGION: West Central DISTRICT: Welland

COMPANY NAME B. F. Goodrich  
& PLANT LOCATION: Niagara Falls

INDUSTRIAL ACTIVITY: Manufacturer of plastic resins PROCESS TYPE: Polyvinyl resins are made from vinyl chloride monomer.

DISCHARGE TYPE: continuous through an open outfall

RECEIVING WATERBODY: DIRECT: Welland River to Niagara River INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 2,130

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorous	0.09	4.5
Biochemical Oxygen Demand	13.9	32
Suspended Solids - Total	3.72	32
Vinyl Chloride monomer	0.23	2.1

COMMENTS:

Effluent quality met all four Ministry target loads. Biochemical Oxygen Demand and Total Suspended Solids and phosphorus requirement set by MOE industrial concentration guidelines. Vinyl chloride monomer guideline set by use of Best Practicable Control Technology.

2515g/57  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000020503

MOE REGION: West Central

DISTRICT: Welland

COMPANY NAME Ford Motor Company

PLANT LOCATION: Niagara Falls

INDUSTRIAL ACTIVITY: Assembly of automobile  
safety glass

PROCESS TYPE: Two glass panes with a plastic layer  
in between is cured to form safety glass.

DISCHARGE TYPE: continuous (treated sanitary and contact cooling water)

RECEIVING WATERBODY: DIRECT: Welland River to Niagara River INDIRECT:

AVERAGE ANNUAL

EFFLUENT FLOW (CUBIC METRES/DAY): 2,730

PARAMETER  
DESCRIPTION

LOAD  
(KG/DAY)

TARGET LOAD  
(KG/DAY)

Phosphorus  
Biochemical Oxygen Demand  
Suspended Solids - Total

4.2  
7.0  
(0)\*

4.5  
40.9  
40.9

COMMENTS:

Effluent quality meets all Ministry guidelines. Target Loads set by MOE general industrial concentration guidelines.

2515g/54 \* Intake exceeded discharge  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001550003 MOE REGION: West Central DISTRICT: Welland

COMPANY NAME Cyanamid Canada Inc.  
PLANT LOCATION: Niagara Falls

INDUSTRIAL ACTIVITY: Inorganic Chemicals Manufacturer PROCESS TYPE: Calcium carbide compounds are made using electric furnaces.

DISCHARGE TYPE: continuous through two outfalls

RECEIVING WATERBODY: DIRECT: Niagara River and power canal to Niagara River

INDIRECT:

AVERAGE ANNUAL EFFLUENT FLOW (CUBIC METRES/DAY): 32,400

PARAMETER DESCRIPTION

LOAD (KG/DAY)

TARGET LOAD (KG/DAY)

Phosphorus  
Suspended Solids - Total

0.57  
202

32.4  
486

COMMENTS:

Effluent quality met all MOE guidelines. Target loads set by MOE industrial effluent concentration guidelines.

2515g/65  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001560002

MOE REGION: West Central

DISTRICT: Welland

COMPANY NAME Diners Delite  
& PLANT LOCATION: Niagara Falls  
(formerly known as Holiday Farms)

INDUSTRIAL ACTIVITY: Food processor

PROCESS TYPE:

DISCHARGE TYPE: Open outfall

RECEIVING WATERBODY: DIRECT: Niagara River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 22.7

PARAMETER  
DESCRIPTION

LOAD  
(KG/DAY)

TARGET LOAD  
(KG/DAY)

Phosphorus  
Biochemical Oxygen Demand  
Suspended Solids - Total

0.14  
12.0  
3.0

4.5  
0.34  
0.34

COMMENTS:

Discharge quality exceeded Ministry concentration guidelines for BOD and suspended solids. Company shut plant down December 1983.

2515g/67  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001650001

MOE REGION: West Central

DISTRICT: Welland

COMPANY NAME Norton Company  
& PLANT LOCATION: Niagara Falls

INDUSTRIAL ACTIVITY: Abrasives manufacturer

PROCESS TYPE: Bauxite is processed in an electric arc furnace into abrasive oxides.

DISCHARGE TYPE: continuous through a submerged outfall

RECEIVING WATERBODY: DIRECT: Welland River to Niagara River INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 15,700

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorus	0.3	15.7
Biochemical Oxygen Demand	4.0	236
Total Suspended Solids	163	236

COMMENTS:

Effluent quality met all Ministry guidelines. Target loads set by MOE industrial effluent concentration guidelines.

2515g/83  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001660000 MOE REGION: West Central DISTRICT: Welland

COMPANY NAME Sohio  
& PLANT LOCATION: (formerly Canadian Carborundum)  
Niagara Falls

INDUSTRIAL ACTIVITY: Abrasive manufacturer

PROCESS TYPE: Abrasive oxides are made from bauxite  
in an electric arc furnaces.

DISCHARGE TYPE: continuous through an outfall

RECEIVING WATERBODY: DIRECT: Welland River to Niagara River INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 9,170

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorus	0.4	4.5
Biochemical Oxygen Demand	7.0	138
Suspended Solids - Total	95.2	138

COMMENTS:

Effluent quality met all Ministry guidelines. Target Loads set by MOE industrial effluent concentration guidelines.

2515g/84  
85/01/31



ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001930007 MOE REGION: West Central DISTRICT: Welland

COMPANY NAME Canadian Cannery Ltd.  
PLANT LOCATION: St. Davids

INDUSTRIAL ACTIVITY: Food Processor

PROCESS TYPE:

DISCHARGE TYPE: batch discharge usually in fall of year

RECEIVING WATERBODY: DIRECT: Four Mile Creek

INDIRECT: 12 km to Lake Ontario

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 2,280

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	23.0	34.1

COMMENTS:

Effluent quality met the Ministry target load which was set by the MOE industrial effluent concentration guidelines.

2515g/91  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001630003 MOE REGION: West Central DISTRICT: Welland

COMPANY NAME General Motors of Canada Ltd.  
& PLANT LOCATION: St. Catharines

INDUSTRIAL ACTIVITY: Iron foundry and engine manufacturer PROCESS TYPE: Coke and iron (pigs and scrap) are charged to a cupola to be processed into iron and cast as engine parts.

DISCHARGE TYPE: continuous for five days a week through an outfall

RECEIVING WATERBODY: DIRECT: Welland Canal INDIRECT: 9.2 km to Lake Ontario

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 129,700

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	1,740	1,950
Phenolics - Total	8.7	2.6

COMMENTS:

Effluent quality met Total Suspended Solids target load but not phenolics. Phenolic control measures have been implemented. Reported results are in error due to phenolic contamination in the laboratory. Target Loads set by MOE industrial effluent concentration guidelines.

2515g/82  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000140509

MOE REGION: West Central

DISTRICT: Welland

COMPANY NAME Domtar Fine Papers

& PLANT LOCATION: St. Catharines

INDUSTRIAL ACTIVITY: Paper mill

PROCESS TYPE: Pulp and clean wastepaper is converted  
into posterboard

DISCHARGE TYPE: continuous through an open outfall

RECEIVING WATERBODY: DIRECT: Old Welland Canal  
to Twelve Mile Creek

INDIRECT: 9.1 km to Lake Ontario

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 9,920

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	752	354
Suspended Solids - Total	345	354
Dissolved Solids - Total	3,050	-

COMMENTS:

Effluent quality met Total Suspended Solids guideline but not Biochemical Oxygen Demand Limit. Consultant is assessing starch additives that will have lower BOD characteristics. Target Loads set by use of Best Practicable Control Technology.

2515g/56  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000830208

MOE REGION: West Central

DISTRICT: Welland

COMPANY NAME Kimberly Clark of Canada Ltd.

& PLANT LOCATION: St. Catharines

INDUSTRIAL ACTIVITY: Paper mill

PROCESS TYPE: Pulp and clean waste paper is made  
into tissue.

DISCHARGE TYPE: continuous through an open outfall

RECEIVING WATERBODY: DIRECT: Old Welland Canal to Twelve Mile Creek INDIRECT: 10.0 km to Lake Ontario

AVERAGE ANNUAL  
EFFLUENT FLOW (CURIC METRES/DAY): 8,640

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Biochemical Oxygen Demand	575	362
Suspended Solids - Total	114	362
Dissolved Solids - Total	2,310	-

COMMENTS:

While in 1983 effluent quality met the Total Suspended Solids guideline but not the Biochemical Oxygen Demand limit, in 1984 the BOD requirement was also being met. Operational changes in 1983, since corrected, caused higher load. Target Loads set by the use of Best Practicable Control Technology.

2515g/58  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001620004 MOE REGION: West Central DISTRICT: Welland

COMPANY NAME Beaver Wood Fibre Company  
& PLANT LOCATION: Thorold

INDUSTRIAL ACTIVITY: Paper mill

PROCESS TYPE: Paperboard is made from pulp and clean  
wastepaper.

DISCHARGE TYPE: continuous through a submerged outfall

RECEIVING WATERBODY: DIRECT: Beaverdams Creek to Twelve  
Mile Creek

INDIRECT: 13.3 km to Lake Ontario

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 16,100

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	2,520	2,720
Suspended Solids - Total	1,860	990
Dissolved Solids - Total	5,230	-

COMMENTS:

Effluent quality met the Biochemical Oxygen Demand guideline but not the Total Suspended Solids limit. Company has submitted a program to eliminate spills to the clarifier which should correct this problem. Target Loads set by the use of Best Practicable Control Technology.

2515g/76  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001910009

MOE REGION: West Central

DISTRICT: Welland

COMPANY NAME Hayes Dana Inc.

& PLANT LOCATION: Thorold

INDUSTRIAL ACTIVITY: Automobile parts manufacturer

PROCESS TYPE: Manufacturer of car and truck drivetrains.

DISCHARGE TYPE: continuous five days through an open outfall

RECEIVING WATERBODY: DIRECT: Twelve Mile Creek

INDIRECT: 6.7 km to Lake Ontario

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 90.0

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Biochemical Oxygen Demand	15.8	1.35
Suspended Solids - Total	4.59	1.35

COMMENTS:

Effluent quality did not meet Ministry target loads. In 1984 company is to be connected to the municipal sewer system. Target Loads set by MOE industrial effluent concentration guidelines.

2515g/90  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000930008

MOE REGION: West Central

DISTRICT: Welland

COMPANY NAME The Ontario Paper Company Ltd.

PLANT LOCATION: Allanburg  
Thorold

INDUSTRIAL ACTIVITY: Newsprint producer

PROCESS TYPE: Newsprint is made from pulp from logs by three pulping processes (sulphite, thermal-mechanical and chemi-mechanical) and from deinked newspaper pulp.

DISCHARGE TYPE: continuous into a buried part of the Old Welland Canal

RECEIVING WATERBODY: DIRECT: Twelve Mile Creek

INDIRECT: 12.4 km to Lake Ontario

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 138,000

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Biochemical Oxygen Demand	16,600	18 100
Suspended Solids - Total	10,200	6,800
Dissolved Solids - Total	77,100	-

COMMENTS:

In 1983 the Biochemical Oxygen Demand requirement was met but the Total Suspended Solids was not. Implementation of recommendations from a study made in 1983 has reduced the TSS load in 1984. A plant Section 126 survey was updated in 1984 and a new control program is to be negotiated. Biochemical Oxygen Demand target load set by Twelve Mile Creek study. Total Suspended Solids target load set by use of Best Practicable Control Technology.

2515g/59  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000940007

MOE REGION: West Central

DISTRICT: Welland

COMPANY NAME Fraser Inc.  
& PLANT LOCATION: Thorold

INDUSTRIAL ACTIVITY: Paper mill

PROCESS TYPE: Fine paper is made from pulp and from  
deinked ledger paper.

DISCHARGE TYPE: continuous through an outfall

RECEIVING WATERBODY: DIRECT: Twelve Mile Creek

INDIRECT: 12 km to Lake Ontario

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 24,800

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	1,810	1,810
Suspended Solids - Total	842	1,500
Dissolved Solids - Total	7,370	-

COMMENTS:

Effluent quality meets Ministry guidelines. Mill has best practicable Biochemical Oxygen Demand reduction system in operation.

2515g/60  
85/01/31



ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000140400 MOE REGION: West Central DISTRICT: Welland

COMPANY NAME Domtar Construction Materials Ltd.  
& PLANT LOCATION: (Allanburg)  
Thorold

INDUSTRIAL ACTIVITY: Paper mill PROCESS TYPE: Pulp is converted into building paper.

DISCHARGE TYPE: continuous into a buried portion of the Old Welland Canal.

RECEIVING WATERBODY: DIRECT: Old Welland Canal  
to Twelve Mile Creek INDIRECT: 15.1 km to Lake Ontario

AVERAGE ANNUAL  
EFFLUENT FLOW (CURIC METRES/DAY): 881

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	501	453
Suspended Solids - Total	221	453

COMMENTS:

Effluent quality met Total Suspended Solids guidelines but not the Biochemical Oxygen Demand limit. A Section 126 survey is proposed for 1985 since plans for zero discharge did not work. Target Loads set by use of Best Practicable Control Technology.

2515g/55  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001460005

MOE REGION: West Central

DISTRICT: Hamilton

COMPANY NAME: Dofasco

PLANT LOCATION: Hamilton

INDUSTRIAL ACTIVITY: Primary steel and iron producer

PROCESS TYPE: Iron ore and coal are used in basic oxygen furnaces, coke ovens and rolling mills to make a wide range of steel products.

DISCHARGE TYPE: continuous through four shore outfalls

RECEIVING WATERBODY: DIRECT: Hamilton Harbour

INDIRECT: Lake Ontario

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 759,000

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>REQUIREMENT (KG/DAY)</u>
Phosphorus	0	759
Biochemical Oxygen Demand	1,180	11,400
Suspended Solids - Total	12,500	11,400
Nitrogen - Ammonia	973	1,520
Phenolics - Total	16.4	15.2
Solvent Extractables	207	11,400
Cyanide	39.3	76
Iron - Total	2,470	7,590
Zinc - Total	53.8	759

COMMENTS:

Effluent quality met seven of nine target loads - phosphorus, Biochemical Oxygen Demand, ammonia solvent extractables (oil and grease), cyanide, iron and zinc, but not Total Suspended Solids, and phenolics even though loadings have been reduced by 58% and 82% respectively since 1978. The phenolics exceedance was due to operating difficulties with the Zimpro effluent treatment system. Problems with the thickeners (TSS) at the blast furnaces caused high levels of Total Suspended Solids which were corrected in 1984. Target Loads set by MOE industrial effluent concentration guidelines.

2515g/80  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000950006 MOE REGION: West Central DISTRICT: Hamilton

COMPANY NAME Stelco Inc.  
PLANT LOCATION: Hilton Works  
Hamilton

INDUSTRIAL ACTIVITY: Primary Steel and Iron Producer

PROCESS TYPE: Iron and coal are used in open hearth, basic oxygen furnaces, coke ovens and various rolling mills to make many different grades of steel and iron.

DISCHARGE TYPE: continuous through five shore outfalls

RECEIVING WATERBODY: DIRECT: Hamilton Harbour

INDIRECT: Lake Ontario

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 1,170,000

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Suspended Solids - Total	12,300	17,600
Nitrogen - Ammonia	574	2,480
Phenolics - Total	64.4	23.4
Solvent Extractables	1,370	17,600
Cyanide	99	117
Iron - Total	4,630	11,700
Zinc - Total	64	1,170

COMMENTS:

Since phosphorus and Biochemical Oxygen Demand loads are consistently 98% below the target loads these two pollutants are not being reported. Effluent quality requirements for six of the seven pollutants -- Total Suspended Solids, ammonium nitrogen, oil and grease (solvent extractables) cyanide and iron were met. Phenolics loadings have been reduced by 63% since 1978 and progress is continuing in identifying additional phenolics sources which are to be controlled. Target Loads are set by MOE industrial effluent concentration guidelines.

2515g/61  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000020008      MOE REGION: Central      DISTRICT: Halton-Peel  
COMPANY NAME Ford Motor Company  
& PLANT LOCATION: Oakville

INDUSTRIAL ACTIVITY: Automobile and Truck Assembly Plant

DISCHARGE TYPE: continuous through an extended outfall weekends flow and pollutants drop off.

RECEIVING WATERBODY: DIRECT: Lake Ontario      INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 10,800

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorus	3.0	10.8
Biochemical Oxygen Demand	293	162
Suspended Solids - Total	106	162
Solvent Extractables (oil/grease)	11	162
Phenolics	0.14	0.22

COMMENTS:

Effluent quality met phosphorus, Total Suspended Solids, phenolics and solvent extractable target loads. The biochemical Oxygen Demand limit was exceeded, however, loadings have been reduced by more than 60% since 1978. Company is negotiating possible discharge to municipal sewage system.

2515g/35  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000510206

MOE REGION: Central

DISTRICT: Halton-Peel

COMPANY NAME Shell Canada Ltd.

& PLANT LOCATION: Oakville

INDUSTRIAL ACTIVITY: Petroleum Refinery

PROCESS TYPE: Crude oil is converted into a wide range of petroleum products.

DISCHARGE TYPE: continuous through an extended outfall

RECEIVING WATERBODY: DIRECT: Lake Ontario

INDIRECT:

AVERAGE ANNUAL

EFFLUENT FLOW (CUBIC METRES/DAY): 2,600

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Phenolics	0.035	0.05
Solvent Extractables	12.4	26
Nitrogen - Ammonia	23.0	26
Suspended Solids - Total	50.6	39

COMMENTS:

Discharge quality exceeded Ministry petroleum refinery effluent concentration guidelines for suspended solids and net the ammonia, phenolics and solvent extractables limits. This refinery was shutdown and dismantled in early 1984.

2515g/31  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000530006 MOE REGION: Central DISTRICT: Halton-Peel

COMPANY NAME Petro Canada Products Ltd.  
& PLANT LOCATION: (formerly BP Oil Ltd.)  
Oakville

INDUSTRIAL ACTIVITY: Petroleum Refinery

PROCESS TYPE: Crude oil is converted into a wide range of petroleum products.

DISCHARGE TYPE: continuous through an extended outfall

RECEIVING WATERBODY: DIRECT: Lake Ontario

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 3,450

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Solvent Extractables (Oil/grease)	6.0	34.5
Phenolics	0.12	0.07
Nitrogen - Ammonia	29.1	34.5
Suspended Solids - Total	60.2	51.8

COMMENTS:

Discharge quality met Ministry petroleum refinery effluent concentration guidelines for solvent extractables and ammonia but exceeded guidelines for phenolics and suspended solids. Loadings of these effluent constituents have been reduced by 40% and 35% respectively since 1978.

2515g/33  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000520106 MOE REGION: Central DISTRICT: Halton-Peel

COMPANY NAME Texaco Canada Ltd.  
& PLANT LOCATION: Port Credit

INDUSTRIAL ACTIVITY: Specialty Solvent Separation PROCESS TYPE: Petroleum solvents are extracted from gasoline fractions.

DISCHARGE TYPE: continuous through an on-shore outfall

RECEIVING WATERBODY: DIRECT: Lake Ontario INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 6,820

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phenolics	0.09	0.14
Solvent Extractables	13.6	68.2
Suspended Solids - Total	91.4	102

COMMENTS:

The discharge quality met Ministry petroleum refinery effluent concentration guidelines.

2515g/32  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000130104

MOE REGION: Central

DISTRICT: Halton-Peel

COMPANY NAME Gulf Canada Products Ltd.  
& PLANT LOCATION: Mississauga

INDUSTRIAL ACTIVITY: Petroleum Refinery

PROCESS TYPE: Crude oil is converted into a wide  
range of petroleum products.

DISCHARGE TYPE: Storm water continuous through an on-shore outfall, process continuous through an extended outfall

RECEIVING WATERBODY: DIRECT: Lake Ontario

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 18,100 (flow rate is for process effluent only does not include once  
through cooling water)

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phenols	0.22	0.36
Solvent Extractables	223.0	181
Nitrogen - Ammonia	33.2	181
Suspended Solids - Total	226	271

COMMENTS:

Discharge quality met Ministry petroleum refinery effluent concentration guidelines for ammonia, phenolics and suspended solids. While solvent extractables loadings still exceeded guideline levels they have been reduced by more than 50% since 1978.

2515g/30  
85/01/31



ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000600007 MOE REGION: Central DISTRICT: Peterborough

COMPANY NAME Borg-Warner Chemicals  
PLANT LOCATION: Cobourg

INDUSTRIAL ACTIVITY: Chemical manufacturer of  
ABS Resins PROCESS TYPE: Acrylonitrile, Butadiene Styrene  
monomers converted into ABS polymer.

DISCHARGE TYPE: continuous through a submerged diffuser

RECEIVING WATERBODY: DIRECT: Lake Ontario INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 1420

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	20.9	54.6
Total Suspended Solids	51.5	54.6
Phosphorus - Total	1.62	4.5

COMMENTS:

All effluent quality guidelines were met. Target loads are set by MOE Industrial Effluent Concentration Guidelines.

2515g/92  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000820209 MOE REGION: Central DISTRICT: Peterborough

COMPANY NAME Eldorado Nuclear Ltd.  
PLANT LOCATION: Port Granby

INDUSTRIAL ACTIVITY: Active low level radioactive waste disposal site PROCESS TYPE: Leachate is collected and chemically treated.

DISCHARGE TYPE:

RECEIVING WATERBODY: DIRECT: Lake Ontario INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY):

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>	
Radioactivity (Ra226)-Dissolved	0.11	0.37	becquerels/L
Arsenic	0.11	0.15	
Sulphate	17.9	30.9	

COMMENTS:

Decommissioning of the site is planned to commence in 1987. Improved arsenic treatment is being investigated. Effluent quality limits are set in AECR operating licence.

2515g/100  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMTS NUMBER: 0000820100                      MOE REGION: Central                      DISTRICT: Peterborough

COMPANY NAME Eldorado Nuclear Ltd.  
PLANT LOCATION: Welcome Waste Site  
Port Hope

INDUSTRIAL ACTIVITY: Closed Low Level Radioactive  
Waste Disposal Site                      PROCESS TYPE: Leachate is collected and chemically  
treated

DISCHARGE TYPE: continuous

RECEIVING WATERBODY: DIRECT: Lake Ontario                      INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 196

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>	
Arsenic	0.17	0.277	
Radioactivity (Ra226)-Dissolved	0.04	0.37	becquerel/L

COMMENTS:

Decommissioning of the site is planned to commence in 1987. Improved arsenic treatment is being investigated.  
Effluent quality limits are set in AECB operating licence.

2515g/93  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000820001

MOE REGION: Central

DISTRICT: Peterborough

COMPANY NAME Eldorado Nuclear Ltd.

& PLANT LOCATION: Port Hope

INDUSTRIAL ACTIVITY: Uranium Refinery and conversion plant    PROCESS TYPE: Uranium is extracted from concentrates and converted into U<sub>6</sub>F<sub>6</sub>

DISCHARGE TYPE: continuous through a submerged diffuser

RECEIVING WATERBODY: DIRECT: Lake Ontario

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 9360

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>
----------------------------------	--------------------------

<u>TARGET LOAD (KG/DAY)</u>
---------------------------------

Fluoride	2.57
Radioactivity (Ra <sub>226</sub> )-Dissolved	0.06

14.0
0.37

becquerels/L (one discharge)

COMMENTS:

The refinery section of the plant; production of uranium oxide from uranium concentrates closed in July, 1983. The east uranium hexafluoride conversion plant will be closed in 1984 when the newly constructed west UF<sub>6</sub> plant begins production.

2515g/34  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000140608

MOE REGION: Southeast

DISTRICT: Belleville

COMPANY NAME Domtar Packaging  
& PLANT LOCATION: Trenton

INDUSTRIAL ACTIVITY: Paper board mill

PROCESS TYPE: Chips are made into pulp by a sodium carbonate cook; the pulp is formed into corrugating medium.

DISCHARGE TYPE: Continuous

RECEIVING WATERBODY: DIRECT: Trent River

INDIRECT: Lake Ontario (Bay of Quinte)

AVERAGE ANNUAL  
EFFLUENT FLOW (CURIC METRES/DAY): 2,120

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	4,530	7,200
Suspended Solids - Total	396	2,300

COMMENTS:

Effluent quality met Ministry guidelines for Biochemical Oxygen Demand and Total Suspended Solids.

2515g/23  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001750009 MOE REGION: Southeast DISTRICT: Belleville

COMPANY NAME Trent Valley Paperboard Mills  
& PLANT LOCATION: Trenton

INDUSTRIAL ACTIVITY: Paper board Mill PROCESS TYPE: Wastepaper is repulped to form a paperboard.

DISCHARGE TYPE: Intermittent

RECEIVING WATERBODY: DIRECT: Trent River INDIRECT: Lake Ontario (Bay of Quinte)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 2,910 \*

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand		104
Suspended Solids - Total	276	816

COMMENTS:

All effluent quality requirements were met. Mill is trying to operate in a closed cycle or zero effluent discharge. Mill has operated for up to ten days with no discharge.

\* Flow values are questionable due to problems with company flow metering equipment.

2515g/29  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001740000 MOE REGION: Southeast DISTRICT: Kingston

COMPANY NAME Strathcona Paper Company  
PLANT LOCATION: Camden East Twp.

INDUSTRIAL ACTIVITY: Paper board Mill PROCESS TYPE: Wastepaper is repulped to form a paperboard.

DISCHARGE TYPE:

RECEIVING WATERBODY: DIRECT: Napanee River INDIRECT: Lake Ontario (Bay of Quinte)

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 3,110

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	651	204
Suspended Solids - Total	62	200

COMMENTS:

The Total Suspended Solids guidelines was met and the Biochemical Oxygen Demand loading was controlled during the summer months to maintain a satisfactory dissolved oxygen content in the river. Biochemical Oxygen Demand guidelines applies to May 15 to Oct. 15 period.

2515g/28  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001730001

MOE REGION: Southeast

DISTRICT: Kingston

COMPANY NAME Celanese Canada Ltd.  
& PLANT LOCATION: Ernestown Twp.

INDUSTRIAL ACTIVITY: Textile plant

PROCESS TYPE: Textiles are made from polyester fibre  
produced by the reaction of ethylene  
glycol and terephthalic acid

DISCHARGE TYPE:

RECEIVING WATERBODY: DIRECT: Lake Ontario

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 21,400

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	171	321
Biochemical Oxygen Demand	334	544

COMMENTS:

Effluent quality met Ministry concentration guidelines.

2515g/2l  
85/01/31



ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000080002 MOE REGION: Southeast DISTRICT: Kingston

COMPANY NAME Dupont Canada Inc.  
PLANT LOCATION: Maitland

INDUSTRIAL ACTIVITY: Producer Automobile Fuel Additive PROCESS TYPE: Tetraethyl lead is made from a lead-sodium alloy and ethyl chloride

DISCHARGE TYPE: Continuous

RECEIVING WATERBODY: DIRECT: St. Lawrence River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 9,200

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Lead	23.2	10.0

COMMENTS:

Company continues to have difficulties in meeting effluent guideline; however, abatement measures to be implemented in 1984 will be evaluated to determine effectiveness.

2515g/24  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001710003

MOE REGION: Southeast

DISTRICT: Kingston

COMPANY NAME Nitrochem Inc.

PLANT LOCATION: Maitland

INDUSTRIAL ACTIVITY: Nitrogen fertilizer plant

PROCESS TYPE: Different grades of ammonia based  
fertilizer are made.

DISCHARGE TYPE: Continuous from a five part effluent system

RECEIVING WATERBODY: DIRECT: St. Lawrence River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 2,900

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Nitrogen - Kjeldahl	2,670	-
Nitrates	1,170	-

COMMENTS:

The company continued to make changes which reduced the pollution load by more than 20% from 1982 levels. The company was given a time extension to the Amending Requirement and Direction for economic reasons. Compliance with concentration limits of 50 mg/L kjeldahl nitrogen and 20 mg/L nitrates is now required by Dec. 31, 1985 in spite of these difficulties.

2515g/26  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001720002

MOE REGION: Southeast

DISTRICT: Kingston

COMPANY NAME Canada Starch Co. Ltd.

PLANT LOCATION: 800 James Street  
Cardinal

INDUSTRIAL ACTIVITY: Starch from corn producer

PROCESS TYPE: Starch is extracted from the grain corn  
in the refinery.

DISCHARGE TYPE:

RECEIVING WATERBODY: DIRECT: St. Lawrence River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 2,860

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>
Suspended Solids - Total	1,480
Chemical Oxygen Demand (Filtered)	408

TARGET LOAD  
(KG/DAY)

560  
-

COMMENTS:

A consultant has been engaged by company to design an improved waste treatment facility, so that the Total Suspended Solids target load will be met.

2515g/27  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001940006      MOE REGION: Southeast      DISTRICT: Cornwall

COMPANY NAME      Kraft Foods Ltd.  
& PLANT LOCATION:      Ingleside

INDUSTRIAL ACTIVITY: Cheesemaker

PROCESS TYPE: Milk is made into cheese

DISCHARGE TYPE: continuous through a submerged diffuser

RECEIVING WATERBODY: DIRECT: Hoople Creek

INDIRECT: 2.0 km St. Lawrence River

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 2,000

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Phosphorus	6.50	4.5
Biochemical Oxygen Demand	18.0	30
Total Suspended Solids	50.0	30

COMMENTS:

Operational problems with treatment caused elevated levels of Total Suspended Solids and Phosphorus.

2515g/88  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0001900000

MOE REGION: Southeast

DISTRICT: Cornwall

COMPANY NAME Courtaulds Canada Ltd.

PLANT LOCATION: Cornwall

INDUSTRIAL ACTIVITY: Rayon Manufacturer

PROCESS TYPE: Dissolving sulphite pulp is reacted to form rayon

DISCHARGE TYPE: continuous through a diffuser shared with BCL

RECEIVING WATERBODY: DIRECT: St. Lawrence River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 9,200

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Biochemical Oxygen Demand	3,110	1,045
Total Suspended Solids	835	750
Zinc	405	890
Sulphuric acid	12,400	-

COMMENTS:

Zinc has been below MOE guidelines for several years. Since 1978 the TSS have been reduced by 67%. A new control order to address the BOD problem is under consideration. Target Loads are based on earlier control order.

2515g/86

85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER:

MOE REGION: Southeast

DISTRICT: Cornwall

COMPANY NAME BCL (formerly TCF)  
& PLANT LOCATION: Cornwall

INDUSTRIAL ACTIVITY: Cellulose film maker

PROCESS TYPE: Viscose supplied by Courtaulds is made into cellulose film.

DISCHARGE TYPE: continuous through a submerged diffuser shared with Courtaulds

RECEIVING WATERBODY: DIRECT: St. Lawrence River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CURIC METRES/DAY): 5,700

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Biochemical Oxygen Demand	1,500	850
Total Suspended Solids	545	850
Sulphuric acid	3,890	5,100

COMMENTS:

Effluent quality met Total Suspended Solids and Sulphuric acid limits but not the Biochemical Oxygen Demand. The BOD loading is expected to decrease as a result of planned improvements in the quality of the raw material (viscose).

2515g/87

84/11/1

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000140301

MOE REGION: Southeast

DISTRICT: Cornwall

COMPANY NAME Domtar Fine Papers

PLANT LOCATION: CORNWALL

INDUSTRIAL ACTIVITY: Kraft Pulp and Paper Mill

PROCESS TYPE: Fine paper is made from logs and chips by the kraft pulping process and from purchased pulp.

DISCHARGE TYPE: Continuous

RECEIVING WATERBODY: DIRECT: St. Lawrence River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 110,000

<u>PARAMETER DESCRIPTION</u>	<u>LOAD (KG/DAY)</u>	<u>TARGET LOAD (KG/DAY)</u>
Biochemical Oxygen Demand	16,100	19,500
Suspended Solids - Total	10,900	-
Dissolved Solids - Total	83,100	-

COMMENTS:

The Biochemical Oxygen Demand guideline was met. A production-based Total Suspended Solids limit became effective December 31, 1983. Based on 1983 production this limit equates to a load of 6,600 kg/day. The company is working towards meeting this target load as specified in the Amended Control Order.

2515g/22  
85/01/31

ONTARIO MINISTRY OF THE ENVIRONMENT  
INDUSTRIAL MONITORING INFORMATION SYSTEM  
WASTEWATER DISCHARGE SUMMARY  
1983

IMIS NUMBER: 0000390401 MOE REGION: Southeast DISTRICT: Cornwall

COMPANY NAME Canadian Industries Ltd.  
& PLANT LOCATION: Cornwall

INDUSTRIAL ACTIVITY: Producer of caustic soda and  
chlorine gas

PROCESS TYPE: The mercury cell process is used to  
produce caustic and chlorine gas from  
table salt.

DISCHARGE TYPE:

RECEIVING WATERBODY: DIRECT: St. Lawrence River

INDIRECT:

AVERAGE ANNUAL  
EFFLUENT FLOW (CUBIC METRES/DAY): 3,060

<u>PARAMETER</u> <u>DESCRIPTION</u>	<u>LOAD</u> <u>(KG/DAY)</u>	<u>TARGET LOAD</u> <u>(KG/DAY)</u>
Mercury	0.06	0.28

COMMENTS:

The effluent quality target load for mercury was met.

2515g/20  
85/01/31



APPENDIX 1  
List of Sources by Drainage Basin

<u>Company</u>	<u>Location</u>	<u>Page</u>
<u>LAKE SUPERIOR</u>		
Abitibi-Price Inc.	(Ft. William), Thunder Bay	4
Abitibi-Price Inc.	(Provincial Mill), Thunder Bay	5
Abitibi-Price Inc.	(Thunder Bay Div.), Thunder Bay	6
Domtar Packaging Ltd.	Red Rockor	7
Great Lakes Forest Products Ltd.	Thunder Bay	1
Industrial Grain Products	Thunder Bay	2
James River Marathon Ltd.	Marathon	9
Kimberly-Clark of Canada Ltd.	Terrace Bay	8
Riechhold Chemicals Ltd.	Thunder Bay	3
<u>LAKE HURON</u>		
Algoma Steel Corporation Ltd.	Sault Ste. Marie	10
Denison Mines Ltd.	Elliot Lake	12
Domtar Chemicals Ltd.	Goderich	26
E. B. Eddy Forest Products Ltd.	Espanola	15
Falconbridge Ltd.	Falconbridge	16
Falconbridge Ltd.	Onaping Falls	17
Falconbridge Ltd.	Moose Lake Wastewater Treatment	18
INCO Ltd. (Garson Mine)	Sudbury	19
INCO Ltd. (Copper Cliff Creek)	Sudbury	20
INCO Ltd. Sulphur Products Dept.	Sudbury	21
INCO Ltd. (Nolin Creek)	Sudbury	22
MacMillan Bloedel Ltd.	Sturgeon Falls	23
Ontario Hydro (Sewage Treatment)	Tiverton	24
Ontario Hydro (Heavy Water Plant)	Tiverton	25
Rio Algom Ltd. (Panel Mill)	Elliot Lake	13
Rio Algom Ltd. (Quirke Mill)	Elliot Lake	14
St. Mary's Paper Inc.	Sault Ste. Marie	11
<u>LAKE ERIE</u>		
Allied Chemical Canada Inc.	Amherstburg	43
Canadian Industries Ltd.	Courtright	38
Canadian Salt Company Ltd.	Windsor	40
Chrysler Canada Ltd.	Windsor	41

<u>Company</u>	<u>Location</u>	<u>Page</u>
Dow Chemical Canada Inc.	Sarnia	27
Dupont Canada Inc.	Corunna	34
Esso Chemicals Canada Ltd.	Sarnia	28
Esso Petroleum Canada	Sarnia	29
Ethyl Canada Inc.	Corunna	35
Fiberglas Canada Inc.	Sarnia	30
Ford Motor Company of Canada Ltd.	Windsor	42
H. J. Heinz Company of Canada Ltd.	Leamington	44
INCO Metals Ltd.	Port Colborne	54
International Minerals and Chemicals	Dunnville	53
J. M. Scheider Inc.	Ayr	52
Ornstead Food Ltd.	Wheatley	45
Petrosar Ltd.	Sarnia	31
Polysar Ltd.	Sarnia	32
Shell Canada Ltd.	Corunna	37
Silknit Ltd. Textile Division	Cambridge	48
Solarware	Cambridge	49
Stanley Works Ltd.	New Hamburg	51
Stelco Inc. Lake Erie Works	Nanticoke	47
Suncor Sunoco Group	Sarnia	33
Tend-R-Fresh Poultry	Petersburg	50
Texaco Canada Ltd.	(Nanticoke Refinery), Jarvis	46
Union Carbide Canada Ltd.	Corunna	36
Windsor Rumper	Windsor	39

#### LAKE ONTARIO

Atlas Steel Company	Welland	59
R. F. Goodrich	Niagara Falls	62
Rorg-Warner Chemicals Ltd.	Cobourg	84
Reaver Wood Fibre Company	Thorold	72
Canadian Canner's Ltd.	St. Davids	68
Canadian Oxy-Durez	Fort Erie	55
Celanese Canada Ltd.	Ernestown Township	91
Cyanamid Canada Inc.	Welland (fertilizer plant)	61
Cyanamid Canada Inc.	Niagara Falls (chemicals)	64
Diners Delite	Niagara Falls	65
Dofasco	Hamilton	77
Domtar Construction Materials Ltd.	Thorold	76
Domtar Fine Papers	St. Catharines	70
Domtar Packaging Ltd.	Trenton	88

<u>Company</u>	<u>Location</u>	<u>Page</u>
Eldorado Nuclear Ltd.	Port Granby	85
Eldorado Nuclear Ltd.	Welcome	86
Eldorado Nuclear Ltd.	Port Hope	87
Fleet Manufacturing Company Ltd.	Fort Erie	57
Ford Motor Co. of Canada Ltd.	Oakville	79
Ford Motor Company of Canada Ltd.	Niagara Falls	63
Fraser Inc.	Thorold	75
General Motors of Canada Ltd.	St. Catharines	69
GNB Batteries Canada Inc.	Fort Erie	56
Gulf Canada Products Ltd.	Mississauga	83
Hayes-Dana Inc.	Thorold	73
Kimberly Clark of Canada Ltd.	St. Catharines	71
Norton Company	Niagara Falls	66
Ontario Paper Company Inc.,	Thorold	74
Petro Canada Products Ltd.	Oakville	81
Shell Canada Ltd.	Oakville	80
Sohio	Niagara Falls	67
Stelco Inc.	Hamilton	78
Stelco Page Hersey Works	Welland	60
Stelco Welland Tube Works	Welland	58
Strathcona Paper Company	Camden East Township	90
Texaco Canada Ltd.	Port Credit	82
Domtar Packaging Ltd.	Trenton	88
Trent Valley Paperboard Mills	Trenton	89
 <u>ST. LAWRENCE RIVER</u>		
RCL (Formerly TCF)	Cornwall	97
Canadian Industries Ltd.	Cornwall	99
Canada Starch Co. Ltd.	Cardinal	94
Courtaulds - Ltd.	Cornwall	96
Domtar Fine Papers	Cornwall	98
Dupont Canada Inc.	Maitland	92
Kraft Foods Ltd.	Ingleside	95
Nitrochem Inc.	Maitland	93

2933g

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(11900)

MOE/INV/ANYB

DATE DUE		

MOE/INV/ANYB  
Ontario Ministry of the En  
Inventory of  
Industrial point source discharges  
in the Great Lakes basin  
c.1 a aa

# Effluent Toxicity Testing

SAMPLE DATE	PASS/FAIL FID. REQ.	ESTIMATE OF TOXICITY	COMMENT
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